
EMERYVILLE GENERAL PLAN

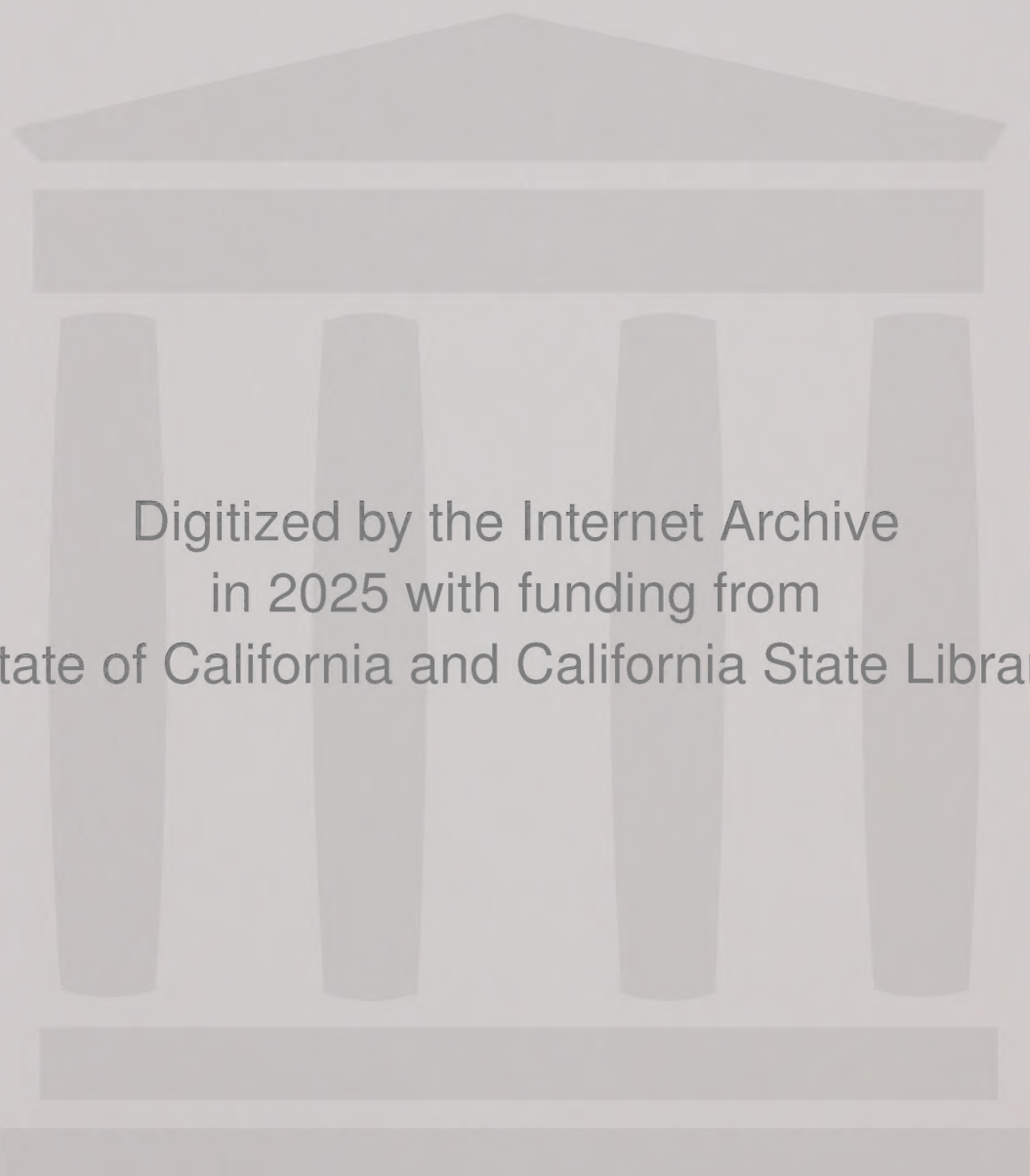
EXISTING AND FUTURE SETTING

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CITY OF EMERYVILLE
GENERAL PLAN PROGRAM

EXISTING AND FUTURE SETTING

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- Public services, which considers the provision and adequacy of services such as education, recreation, police and fire protection, etc.
- Environmental hazards, which considers potential natural and urban threats to life, comfort, and property.
- Environmental resources, which considers the presence and significance of natural and cultural resources, such as water quality, wildlife, energy, archaeological sites, etc.

The focus of these discussions is on the City of Emeryville, the boundaries of which are illustrated in Figure I-1. The city naturally falls into three subareas because of the transportation corridors that traverse it in a north-south direction. These subareas are also convenient because they represent different periods in the city's development history, and are distinguished by different land uses and building forms. When appropriate, information on the city is disaggregated into these subareas.

Being strategically located in the heart of the San Francisco Bay Region (see Figure I-2), Emeryville must necessarily be considered in a regional context. The city is an integral part of the region's economy, transportation system, and visual image. Moreover, it shares a unique shoreline and open space resource with Oakland, Berkeley, and Albany that demands a coordinated regional examination; it is also a member community of a regional water supply and wastewater treatment utility. Accordingly, a discussion of Emeryville's setting cannot ignore regional concerns or the implications of regional decisions on the city.

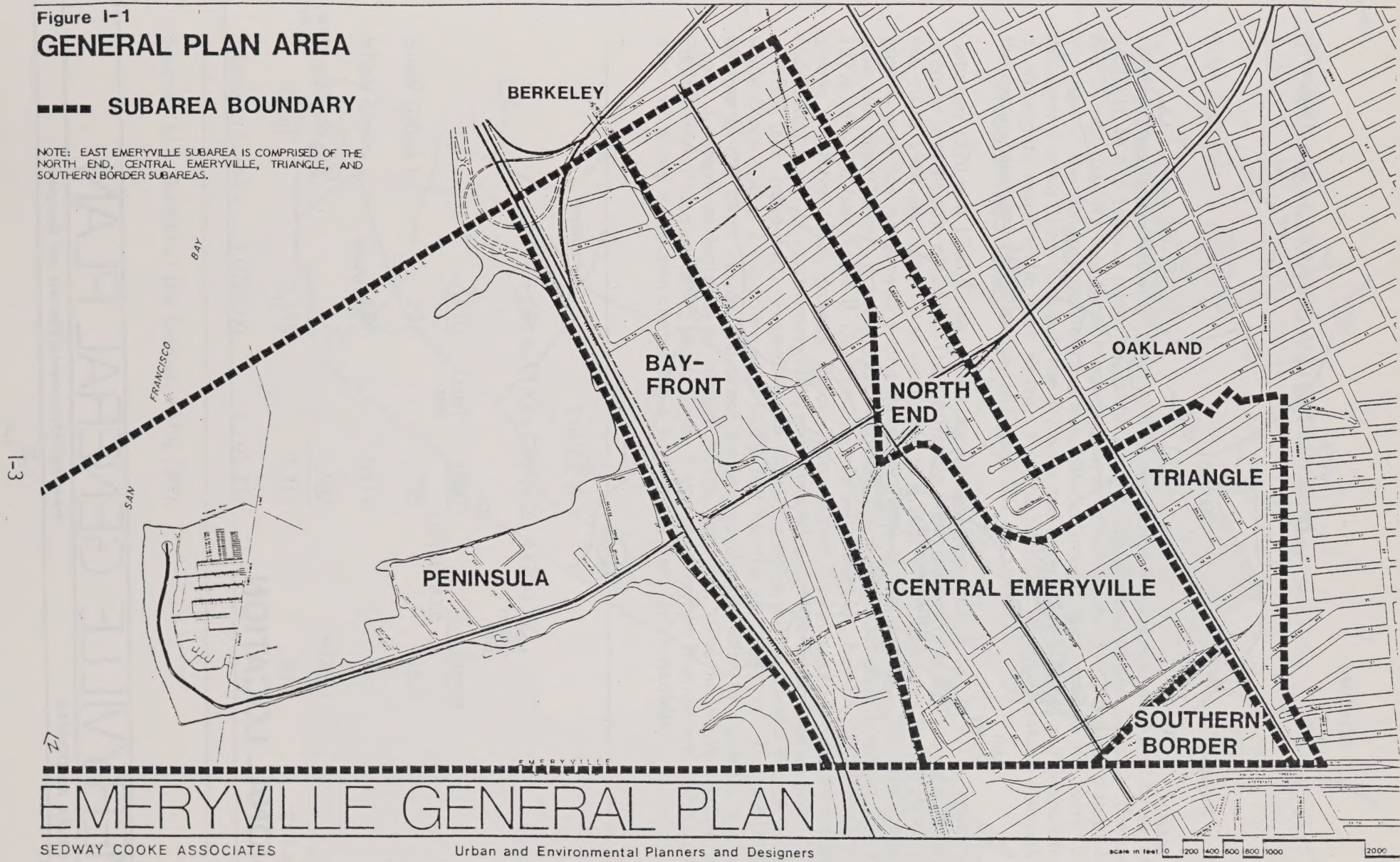
Emeryville is a rare and unusual place in that it combines the intimacy of a small town with the diversity of a large urban center. Much of the city's character could change significantly if land use issues and their implications are not carefully considered in terms of the city's overall economic, cultural and social fabric. This general planning process is the perfect opportunity for the entire community to participate in making decisions about the city's future. The resulting planning document can either solidify Emeryville's good qualities while striving to eliminate its problems, or it can reshape the city into an almost entirely new form. In either case, the community must make the most of this opportunity to determine the form Emeryville will take in the next several decades.

Figure I-1

GENERAL PLAN AREA

----- SUBAREA BOUNDARY

NOTE: EAST EMERYVILLE SUBAREA IS COMPRISED OF THE NORTH END, CENTRAL EMERYVILLE, TRIANGLE, AND SOUTHERN BORDER SUBAREAS.



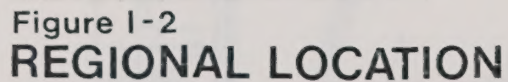
EMERYVILLE GENERAL PLAN

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2000



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II. POPULATION, HOUSING AND EMPLOYMENT

POPULATION

Historic Population Growth. Emeryville's population trends are measured by several local, state and federal agencies, including the U.S. Bureau of the Census. The census divides the city into three block groups, or subareas, roughly parallel to those being used in the general planning process. Block Group 1 encompasses the North End residential area; Block Group 2, the Triangle and Emery Bay Village; and Block Group 3, Watergate and Pacific Park Plaza. For the purposes of this chapter's discussion, the census block groups delineated in Figure II-1 are used.

Between 1970 and 1980, Emeryville's population grew from 2,681 to 3,714, an annual average growth rate of 3.9%. The California State Department of Finance estimates the city's 1984 population had increased to 3,968, which indicates the city's annual growth rate has not slowed during the early years of this decade. The city's growth rate was significantly greater than Alameda County's annual growth rate during the 1970s of 0.3% (see Table II-1). The city's growth was not, however, shared equally among the three block groups. Block Groups 1 and 2, which contain the established residential areas of East Emeryville, experienced a decline in population from 1970 to 1980 (see Table II-1). Population in Block Group 1 fell 18.3% during the 1970s, while Block Group 2 experienced a 16.2% fall for the same period. The population decline in the older residential areas contrasted sharply with the growth in Block Group 3, where an increase of almost 9000% occurred. Due to the Watergate and Pacific Park Plaza projects, Block Group 3 was transformed from an area with virtually no housing to an area containing a majority of the city's population.

TABLE II-1
POPULATION CHANGE, 1970-1980

	<u>1970</u>	<u>1980</u>	<u>% Change</u>
Block Group 1	977	798	-18.3
Block Group 2	1,687	1,414	-16.2
Block Group 3	<u>17</u>	<u>1,502</u>	8735.3
Total	2,618	3,714	38.5
Alameda County	1,073,000	1,105,379	3.0

Source: U.S. Bureau of the Census, 1970, 1980.

TABLE II-4

POPULATION BY HOUSEHOLD TYPE
AND SIZE BY BLOCK GROUP, 1980

	<u>Block Group 1</u>	<u>%</u>	<u>Block Group 2</u>	<u>%</u>	<u>Block Group 3</u>	<u>%</u>	<u>City Total</u>	<u>%</u>
Family	719	90.2	963	68.1	501	33.4	2,183	58.7
Non-Family	69	8.7	451	31.9	1,001	66.6	1,521	41.0
Group	<u>9</u>	<u>1.1</u>	<u>0</u>	<u>-</u>	<u>0</u>	<u>-</u>	<u>9</u>	<u>0.2</u>
Total	797	100.0	1,414	100.0	1,502	100.0	3,714	100.0
Persons per Household	2.90		2.00		1.30		1.71	

Source: U.S. Bureau of the Census.

Ethnicity. The ethnic composition of the city is presented in Table II-5. Whites accounted for 58% of the population in 1980. While the city's population grew 38.5% between 1970 and 1980, the Black population grew only 4.5%. The Black population has declined in relative size when compared with the growth of other ethnic groups and constituted only 62% of the City's minority population.

There are significant differences in the ethnic composition among the block groups. Whites comprise 40.5% of Block Groups 1 and 2 but 84.7% of Block Group 3. About 86.0% of the Black population resides in Block Groups 1 and 2, with Blacks constituting a 55.5% majority in Block Group 1. The majority of the Asian community (71%) and of the Hispanic population (71%) live in Block Group 2.

TABLE II-5

ETHNIC POPULATION DISTRIBUTION BY BLOCK GROUP, 1980

	<u>Block Group 1</u>	<u>%</u>	<u>Block Group 2</u>	<u>%</u>	<u>Block Group 3</u>	<u>%</u>	<u>City Total</u>	<u>%</u>
White	323	40.5	574	40.6	1,267	84.7	2,166	58.0
Black	443	55.5	462	32.7	143	9.5	1,048	28.2
Asian	25	3.1	217	14.4	65	4.3	307	8.3
Native American	0	-	0	-	4	0.3	4	0.1
Other	<u>7</u>	<u>0.9</u>	<u>161</u>	<u>11.4</u>	<u>18</u>	<u>1.2</u>	<u>1,186</u>	<u>5.0</u>
Total	798	100.0	1,414	100.0	1,499	100.0	3,711	100.0
Spanish Origin*	63	7.9	240	17	40	2.7	343	9.2

Source: U.S. Bureau of the Census.

* Spanish Origin includes all racial groups identifying themselves as "Spanish Origin"

Income. Income figures for the city are consistently lower than the county's. In 1980, the city's household median income (the median income of persons occupying a household unit) was \$17,102 while the county's was \$18,700 or 9% higher than the city's (see Table II-6). Emeryville's income levels vary widely among the three block groups. Family median incomes (median income of individuals related by blood or marriage constituting a household) in Block Groups 1 and 2 at \$16,200 and \$13,634, respectively, were lower than the city's. Block Group 3's median family income of \$30,000, however, was 131% of the county's median. Household medians are also very low in Block Groups 1 and 2 compared to Block Group 3. Block Group 3's household median income was 37.6% higher than Block Group 1's median and 112% greater than Block Group 2's.

Variations in incomes among the block groups correspond to differences in the city's housing types. Block Groups 1 and 2 represent the older residential sections and workers are predominantly blue-collar, and in Block Group 2, in particular, there is a high proportion of fixed-income elderly. In contrast, the residential areas of Block Group 3 include the Watergate and Pacific Park Plaza developments whose residents are primarily employed in managerial and professional positions.

TABLE II-6
HOUSEHOLD AND FAMILY MEAN AND MEDIAN INCOMES, 1980

	<u>Block Group 1</u>	<u>Block Group 2</u>	<u>Block Group 3</u>	<u>City Total</u>	<u>Alameda County</u>
Households					
Median	\$16,000	\$10,359	\$22,023	\$17,102	\$18,700
Mean	19,132	12,555	25,533	20,474	21,773
Families					
Median	16,200	11,424	30,000	17,708	22,863
Mean	19,919	13,634	37,061	23,079	25,595

Source: U.S. Bureau of the Census.

Future Growth Trends. The Association of Bay Area Governments (ABAG) projections for Emeryville made in 1983 predicted that the city would grow substantially faster through the year 2000 than Alameda County (see Table II-7). By 1985, the city's population is expected to reach 4,950, a 33.0% increase over 1980; whereas Alameda County is expected to experience a 5.9% increase. The ABAG projections indicate that by the year 2000, Emeryville will have a population of 6,800, an 83.1% increase over 1980, far outpacing the 16.4% increase predicted for the county over the same period. Over this period, ABAG predicts that the city's household size will continue to decline from its present 1.74 to 1.71 in 1990 to 1.66 by 2000. Citywide growth trends are illustrated in Figure II-1.

Figure II-1

PROJECTIONS: POPULATION, HOUSING, AND EMPLOYMENT 1980-2000

----- BLOCK GROUP BOUNDARY

9-11

SAN FRANCISCO
SAY

2000	6,800
1990	5,770
1980	3,714

POPULATION
OF INHABITANTS

2000	4,133
1990	3,353
1980	2,132

HOUSING
OF UNITS

2000	15,500
1990	13,800
1980	12,344

EMPLOYMENT
OF JOBS

Block Group 3

Block Group 2

Block Group 1

SOURCE: ABAG, Projections - 83, June 1983.

EMERYVILLE GENERAL PLAN

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SCALE in feet 0 200 400 600 800 1000 1200

TABLE II-7
POPULATION AND HOUSEHOLD PROJECTIONS, 1980-2000

	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
Population	3,714	4,950	5,700	6,300	6,800
Households	2,132	2,860	3,340	3,760	4,100
Average Household Size	1.74	1.73	1.71	1.68	1.66

Source: ABAG, Projections - '83, June 1983.

HOUSING

Introduction. The provision and preservation of decent, affordable housing is clearly recognized as one of the most pressing issues facing the Bay Area. Local governments, businesses, and many special interest groups all have become housing advocates, as the supply of land has diminished and the price of shelter has risen to the point where most households can no longer dream of owning a home. Similarly, the growing recognition of how the balance of jobs and housing directly affects commuting patterns and indirectly influences air quality has reinforced efforts to locate housing near existing job concentrations. As a result, the provision of housing demands a regional perspective. At the same time, housing is a very local issue. The preservation of the housing stock contributes tremendously to neighborhood quality, to civic pride, and to the visual identity of the community. In Emeryville, the relatively large numbers of single-person households, of low-income households, and of artists and crafts people create special housing needs that cannot be overlooked.

This section briefly describes the city's existing housing stock. The discussion follows the Government Code Section 65302(c) requirements for a housing element. Much of the information presented here is abstracted from reports prepared by Connerly & Associates, Inc., retained by the city to develop background data for the city's housing element.¹ Further details on household and housing stock characteristics and on affordability can be reviewed in those reports.

Housing Characteristics. The following section is a description of the general characteristics of Emeryville's housing stock, beginning with the number, location and concentration of the different types of housing units within the city. Proportions of

¹ Connerly & Associates, Inc., Emeryville Housing Element, August 1984.

owners and renters, housing costs, vacancy rates, and the age and condition of the housing are also discussed.

Housing Types. In 1980, there was a total of 2,416 year-round housing units in Emeryville, of which 16% (376 units) were single-family detached houses, 1.4% (33) were single-family attached houses, 6.4% (155) were in duplex buildings, 8.5% (206) were in buildings of 3-4 units, and 68% (1,639) were in buildings with five or more units. Nearly half (1,157) of the year-round units were condominiums. Of the 992 occupied condominium units, 67.3% (668) were owner-occupied.

As shown in Table II-8, Block Group 1, encompassing the North End, contained the fewest housing units, less than 15% of the city's housing supply. The predominant housing type in this subarea of the city was single-family detached units. Block Group 2 contained the greatest variety of housing types and accounted for a majority in all of the housing types, except structures with five or more units. Altogether, Block Group 2, representing the oldest residential areas in the city, including the Triangle, accounted for one-third of Emeryville's housing supply in 1980. The newest residential development, found in Block Group 3, has occurred almost exclusively (99%) as large complexes of five or more units. As a result of intensive development in this subarea, Block Group 3 contained a majority (54%) of the city's housing units in 1980.

Since 1980, approximately 640 new units have been constructed in Emeryville. Roughly 90% of the new construction is accounted for by the 30-story Pacific Park Plaza project. As discussed in Chapter III, this development marks a growing trend for Block Group 3 (the city's Peninsula and Bayfront planning subareas) to contain an increasing proportion of the city's residences.

TABLE II-8
YEAR-ROUND HOUSING TYPES, 1980

	<u>Block Group 1</u>	<u>Block Group 2</u>	<u>Block Group 3</u>	<u>City Total</u>
Single-Family Detached	155	221	--	376
Single-Family Attached	--	22	11	33
Duplex	42	113	--	155
3-4 Units	50	156	--	206
5 or More Units	79	272	1,288	1,639
Mobile Home	--	--	7	7
Total	326	784	1,306	2,416

Source: 1980 Census of Population and Housing, Summary Tape File 3A.

Tenure. Of the city's occupied housing units, 57.7% (1,231) were rented, while the remaining 42.3% (901) were owner-occupied. Tenure varied tremendously, however, among block groups. Both Block Groups 1 and 2 had high percentages of renters

(72.5% and 82.9%, respectively). In contrast, in Block Group 3, only one-third of the occupied units were rented and the rest were owner-occupied.

Housing Costs. The 1980 median housing unit value in Emeryville was \$47,000, 45% of the total Alameda County median housing unit value of \$84,900. Consequently, the median monthly cost of home ownership in the city was also considerably lower than in Alameda County as a whole. In the city, the median monthly cost was \$308 with a mortgage and \$76 without; in the county, it was \$394 with a mortgage and \$100 without a mortgage. The median cost of home ownership in Block Group 1 was \$238 per month with a mortgage, \$60 without a mortgage. In Block Group 2, the cost was \$350 per month with a mortgage, \$91 without. Data for Block Group 3 were not available.

Rental costs also tended to be lower in the city where the median gross rent was \$226, compared to \$266 in the county. Table II-9 illustrates the monthly costs for rental units for each census block group.

TABLE II-9
RENTER-OCCUPIED HOUSING UNITS BY GROSS RENT, 1980

<u>Gross Rent</u>	<u>Block Group 1</u>		<u>Block Group 2</u>		<u>Block Group 3</u>	
\$0-59	0	-	8	1.3%	4	1.0%
60-99	0	-	21	3.5%	0	-
100-149	24	10.8%	116	19.5%	8	2.1%
150-199	57	25.6%	206	34.6%	16	4.2%
200-249	79	34.4%	171	28.7%	6	1.6%
250-299	0	-	30	5.0%	14	3.6%
300-349	27	12.1%	27	4.5%	59	15.3%
350-399	7	3.1%	14	2.3%	112	29.1%
400-499	17	7.6%	3	0.5%	129	33.5%
500+	0	-	0	-	30	7.8%
No Cash Rent	12	5.4%	0	-	7	1.8%
	223	100.0%	596	100.0%	385	100.0%

Source: 1980 Census of Population and Housing, Summary Tape File 3A.

Vacancy. There were 284 unoccupied housing units, or 11.8% of the city's year-round housing supply in 1980. Since 180 of these vacant units were for sale or rent, the actual vacancy rate for available units was 7.5% (180 vacant units divided by the 2,416 year-round housing units). The vacancy rate for rental units was 10.5%, while the vacancy rate for ownership units was 5.4%. The State Department of Housing and Community Development's ideal vacancy rates of 6% for rental units and 2% for ownership units are based on objectives of providing sufficient mobility within the local housing market and normal turnover. Given Emeryville's housing composition,

the city's ideal vacancy rate would be 4.4%. Without accounting for housing costs and preferences, there would appear to be an adequate supply of housing since the city's actual vacancy rate in 1980 was 7.5%. However, it should be noted that a majority of the vacant units are likely to be found in the more recently developed, higher-priced units in Block Group 3. Thus, the availability of affordable housing in the other areas of the city may be quite constrained. Table II-10 supports this conclusion.

TABLE II-10
VACANCY RATES BY BLOCK GROUP, 1980

	<u>Block Group 1</u>	<u>Block Group 2</u>	<u>Block Group 3</u>
Vacant Units for Sale	0	0	51
Ownership Vacancy Rate	-	-	6.1%
Vacant Units for Rent	6	27	96
Rental Vacancy Rate	2.5%	4.2%	20%
Combined Vacant Units for Sale/Rent	6	27	147
Overall Vacancy Rate	1.9%	3.5%	12.1%

Source: 1980 Census of Population and Housing, Summary Tape File 3A.

Age and Condition of Housing Stock. Nearly one-half of Emeryville's housing units were constructed after 1970. However, virtually all of these are situated in Block Group 3. One-half of the units in Block Group 1 and almost two-thirds of the units in Block Group 2 were built before 1940. The vast majority of this older housing stock is located in the Triangle.

In order to determine where housing rehabilitation programs might be needed, the physical condition of the older housing stock was assessed. The firm of Connerly & Associates, Inc., under contract to the city, undertook a survey of the exterior condition of housing units in much of the North End, the Triangle, and the Southern Border in 1983. It was assumed that housing units in Block Group 3 were still in good condition because of their recent construction. The criteria used to evaluate the condition of housing units was based on the Uniform Housing Code, 1979 edition. Of the units surveyed, 69.1% were found to be in good condition, 20.3% in fair condition, and 10.6% in poor condition. Units receiving a good rating either had no or very minor deficiencies, such as a need for paint. Those units classified as being in fair condition had several deficiencies, but the cost to improve them to good condition was not high, in most instances less than \$5,000. The units found to be in poor condition exhibited significant deficiencies and would require major rehabilitation to be classified in good condition.

The city currently administers two programs aimed at the rehabilitation of inadequate housing. The citywide Housing Rehabilitation Department is responsible for administration of redevelopment program monies for rehabilitation and for monitoring contract work for compliance. To participate in the program, owners must apply to the city.

In direct contrast, the city's Neighborhood Conservation Services program advocates an outreach campaign, aimed at encouraging resident participation within defined "target areas." This non-profit corporation, initiated in Emeryville in 1980, uses a site selection committee to determine the target areas. Committee members follow general criteria in defining the areas:

- manageable size--approximately 100-150 units;
- basically sound housing structures in need of repair;
- a large number of owner-occupied structures;
- distinct boundaries;
- an area large enough to stimulate the imagination of those who invest their energy and funds, but small enough to permit an early visible success;
- an average repair cost consistent with resources available; and
- resident interest committed to the success of the improvement effort, gauged in part by their past participation in other city rehabilitation programs.

Windshield surveys of the city's older stock were performed in the spring of 1984 to help select target areas. Covering the same area as the earlier Connerly & Associates field work, Neighborhood Conservation Services staff examined about 340 properties, representing approximately 640 units. Similar to the Connerly & Associates study, 10-15% were found to be in poor condition, although a smaller percentage was found to be in good condition (56% compared to 69%).

The monies made available through the program are geared toward total neighborhood revitalization, meaning they can be used for landscape and sidewalk improvements as well as housing improvements. For rehabilitation work, the program administers a revolving loan which is funded by the city each year. The program then makes loans to residents within the target areas who cannot otherwise obtain conventional loans. The interest rates and terms of the loans vary, depending on the ability of the owner/property to pay. Direct grants, such as Community Development Block Grants, are used to fund landscape sidewalk improvements and tree planting projects.

Although the two programs are intended to improve the housing stock in the city, there is little coordination between the two, and the division of responsibilities is somewhat blurred. For example, there is no one individual or agency responsible for coordinating grant proposals. At the same time, once a target area is defined, one would assume all rehabilitation activities would be directed by the Neighborhood Conservation Services. In fact, if the project is too expensive to fund, property owners must approach the Housing Rehabilitation Department. Thus, one of the strategies of the city's housing element will be to establish a coordinated approach to housing rehabilitation.

Affordability and Special Housing Needs. As noted earlier, there would appear to be an adequate supply of housing because of the relatively high vacancy rates. However, the reason for the unoccupied units may reflect housing costs beyond the ability of people to pay. Thus, the issue of affordability must be considered in assessing the city's housing situation. Certain segments of the population have special housing needs because of the affordability issue. These groups are described below.

Low and Moderate Income. The most widely used definitions of income groupings of population are those used by the U.S. Department of Housing and Urban Development to determine eligibility for federal housing assistance. Applied to the Bay Area, a very-low-income household is one with an income less than 50% of the median income for the region. A low-income household is one with an income of 51-80% of the regional median income. A moderate-income household is one with an income of 80-120% of the regional median income. A household with an income greater than 120% of the regional median is considered above moderate income.

Using Alameda County's median family income figure (\$22,863), 51.6% of Emeryville's population would be considered low income. In 1980, 23.6% of Emeryville's families earned incomes between 80% and 120% of the countywide median family income. Table II-11 presents the distribution of the low- and moderate-income family population among block groups.

TABLE II-11
LOW- AND MODERATE-INCOME FAMILIES, 1980

	<u>Block Group 1</u>	<u>Block Group 2</u>	<u>Block Group 3</u>
Distribution of Low-Income Families	31%	57%	11%
Percentage of All Families	61%	73%	18%
Distribution of Moderate-Income Families	29%	36%	35%
Percentage of All Families	26%	21%	25%

Source: 1980 Census of Population and Housing, Summary Tape File 3A.

Note: The Alameda County median family income figure is used.

The Emery Glen public housing project, the rental rehabilitation loan program, and the Emery Bay Village condominium development are part of the city's housing program designed to alleviate the burden of housing costs for low- and moderate-income families. Additionally, the city is mandated to provide for a fair share of the region's housing needs across the range of income levels by federal and state law. ABAG has projected a total of 1,221 new units for Emeryville between 1980 and 1990, of which 317 are designated for very low income, 220 for low income, 269 for moderate income, and 415 for above moderate income.

Elderly. Nearly three-quarters of the city's elderly population lived in Block Groups 1 and 2, and of those who live in poverty, 90% lived in Block Group 2. This segment of the population is especially vulnerable to rising housing costs because they often live on fixed incomes.

Physically Disabled. In 1980, 5.3% (197) of the city's population had a disability which prevented these persons from using public transportation. Sixty percent of these were elderly persons, and 86% of the total disabled population lived in Block Groups 1 and 2. The special housing needs of this group are location convenient to services, accessibility, and interior design features to increase livability.

Female-Headed Families with Children. This population segment represents an increasing portion of Emeryville's population. In 1970, 20.7% of the families with children were headed by a single female. By 1980, that number had grown to 53.2% of all families with children. Of those families, 29.5% lived in poverty. The entire population of female-headed families was concentrated in Block Groups 1 and 2. Since many of these families with female heads are low-income, it is important to provide low-cost housing opportunities suitable for child-rearing.

Live/Work Space for Artists. A group of people with unique housing needs who live and work in Emeryville are artists who have traditionally found studio and living space in warehouse and light industrial districts. Emeryville, once a haven for artists forced out of San Francisco by rising costs, may also become out of reach for this group without special assistance.

Growth Trends. By the year 2000, ABAG projects a total number of 4,100 households living in Emeryville, an increase of 92% over the 1980 figure (see Table II-7). The most significant contribution to the city's housing supply will be in the city's redevelopment areas, especially in the Bayfront, where new high- and medium-density residential development is anticipated. The city's General Plan, Bayfront Specific Plan, and Redevelopment Plan will promote additional housing development and conservation of existing units.

EMPLOYMENT

Introduction. The purpose of this section is to describe the types of jobs found in Emeryville, as well as the types of jobs held by the resident labor force. Because the employment base naturally reflects the type and intensity of nonresidential land uses, this section should be reviewed in conjunction with Chapters III and IV, which, respectively, discuss the city's land use patterns and real estate market. The city's employment base can best be described as transitional. The historical industries that have accounted for the majority of the city's jobs are relocating; the new industries that have located in the city are smaller-scale in operation and much more labor-intensive. Emeryville, with its incredible development potential and locational advantage relative to other East Bay communities, is in a position to see a dramatic transformation of its economic base.

Jobs in Emeryville. Overall, the city employs approximately 12,900 people, or an estimated 2.4% of the county's 1985 employment projection of 535,900. Although its portion of the regional share is small, the city is a major "jobs exporter." Relative to its labor force of 1,761 workers, the city has a major surplus of jobs, with over seven jobs for every employed resident, compared to one job for every employed resident in the county. The city's traditional image as an industrial city is largely reflected in its employment base. Approximately 45% of the city's employees work in manufacturing, primarily in machinery, foods, furniture, printing, or film. By contrast, less than 15% of the county's employment is in manufacturing. As shown in Table II-12, other industries, such as wholesale and service, account for substantial employment

in Emeryville but are relatively minor compared to the numbers employed in manufacturing.

Over two-thirds of the city's jobs are located east of the railroad tracks in East Emeryville. Most of the city's largest employers, such as Cetus, Grove Valve & Regulator, and Wonder Bread, are located in this area. Nearly one-half (49.6%) of the area's 8,800 employees work in manufacturing. More significantly, this accounts for over three-quarters of the city's manufacturing employment, suggesting that this type of employment is concentrated in this area. Table II-12 shows that, in fact, East Emeryville represents the primary job location for a number of different industries, including wholesale (80%), retail (55%), and service (70%).

The Bayfront represents the city subarea with the greatest potential for change. Two-thirds of the area's 1,950 employees work in large-scale manufacturing, wholesale, and trucking activities, such as Judson Steel, Pfizer Company, and Garrett Freightlines. Because of its location between the railroad and the freeway, the Bayfront is ideal for trucking and warehousing. This is reflected in the employment figures which show nearly 60% of the city's employment in this industry is located in the Bayfront. Nevertheless, these uses are slowly being replaced by office, retail, and hotel uses, as the land values have increased to the point where large-scale, land-intensive businesses are no longer economically viable. In addition, many of the larger spaces have been rehabilitated and subdivided to provide space for the city's growing arts and crafts and film industries.

While the employment patterns in the Bayfront and East Emeryville are representative of the traditional, industrial image of the city, the employment pattern on the Peninsula is an illustration of more recent development trends in the city and in the East Bay. Although occupying only a small portion of the city's land area, the Peninsula accounts for approximately 20% of the businesses (132) and employment (2,215) in Emeryville. The numbers in Table II-12 reveal that manufacturing still dominates the employment character of the area; however, the jobs are more likely to be of an office nature rather than machine-intensive. Virtually all of the "manufacturing jobs" are with Cutter Laboratories, a high-technology bioengineering firm located in one of the area's office towers. With the number of highrise towers in the area, it is not surprising that about 67% of the city's finance, insurance, and real estate jobs also are found on the Peninsula.

As the economic and employment base of Emeryville shifts from its historic industrial origins, the city will begin to accommodate more labor-intensive and service-oriented businesses at higher employment densities (employees per square foot). This shift will have major implications for the city's land use pattern and transportation system. The discussions here and in Chapters III and IV present a different picture of future employment trends than those projected by ABAG, which are shown in Table II-13. ABAG's figures show a major emphasis on manufacturing and wholesale over the next 15 years. Retail and service employment will account for a diminishing proportion.

TABLE II-12
EMPLOYMENT BY INDUSTRY, 1984

	<u>Peninsula</u>		<u>Bayfront</u>		<u>East Emeryville</u>		<u>City Total</u>	<u>%</u>
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>		
Construction	157	7.1	65	3.3	141-143	1.6	363-365	2.8
Manufacturing	613	27.7	780	40.0	4,347- 4,351	49.6	5,740- 5,744	44.4
Wholesale	73	3.3	209	10.7	1,154	13.2	1,436	11.1
Trucking/warehouse	0	-	274	14.1	193	2.2	467	3.6
Finance, insurance and real estate	376	17.0	125	6.6	59	0.7	558	4.3
Retail	320	14.4	117	6.0	542-548	6.2	979-985	7.6
Service	386	17.4	170	8.7	1,224- 1,228	14.0	1,750- 1,754	13.5
Mixed uses:								
Manufacturing/service	0	-	0	-	52-57	0.6	52-57	0.4
Manufacturing/retail	0	-	0	-	15	0.2	15	0.1
Manufacturing/wholesale	0	-	136	7.0	513	5.8	649	5.0
Wholesale/retail	0	-	28	1.4	99	1.1	127	1.0
Wholesale/service	0	-	40	2.1	2	-	42	0.3
Retail/service	0	-	0	-	194-195	2.2	194-195	1.5
Wholesale/retail/ manufacturing	0	-	0	-	100	1.1	100	0.8
Public	175	7.9	0	-	0	1.1	175	1.4
Unknown	<u>115</u>	<u>5.2</u>	<u>6</u>	<u>0.3</u>	<u>137</u>	<u>1.6</u>	<u>258</u>	<u>2.0</u>
Total	2,215	100.0%	1,950	100.0%	8,772- 8,817	100.0%	12,905- 12,937	100.0%

Source: Contacts Influential, October 1984; SCA.

TABLE II-13
EMPLOYMENT PROJECTIONS, 1980-2000

	<u>1980</u>	<u>%</u>	<u>1990</u>	<u>%</u>	<u>2000</u>	<u>%</u>
Agriculture and Mining	93	0.8	90	0.7	80	0.5
Manufacturing and Wholesale	6,080	49.3	5,840	42.3	6,870	44.4
Retail	1,466	11.9	1,930	14.0	2,330	15.1
Services	1,833	14.8	2,290	16.6	2,290	14.8
Other	<u>2,872</u>	<u>23.3</u>	<u>3,670</u>	<u>26.6</u>	<u>3,890</u>	<u>25.2</u>
Total	12,344	100.0	13,820	100.0	15,460	100.0
County	511,106		581,000		674,900	
% of County	2.4%		2.4%		2.3%	

Source: ABAG, Projections - '83, June 1983.

Emeryville's Labor Force. Given the projected changes in the types of jobs likely to be provided in the city, it is worthwhile examining the job skills of Emeryville's resident workers. Such comparisons can highlight shortages in certain business sectors. When local jobs do not match resident labor skills, residents must commute to other places for employment. An objective of the General Plan could be to encourage a better job/skills match to reduce the need to commute and thereby reduce energy consumption and air pollutant emissions.

As of 1980, there were 1,761 resident workers in the city. Table II-14 illustrates the types of jobs these individuals hold. As noted earlier, there are approximately seven jobs for each resident worker in the city. This "job availability" varies considerably by industry. Manufacturing and wholesale have 20 and 12 jobs, respectively, for every Emeryville resident employed in those industries. For the other industries, the number ranges from a low of two for the finance, insurance and real estate industry to five for services. The anticipated shift in the city's employment base towards retail and service would still be compatible with the job skills possessed by Emeryville residents. However, the closing or relocation of some of the city's large manufacturing and trucking operations could affect a considerable number of Emeryville residents, as over one-quarter are employed in these businesses (although not necessarily in Emeryville).

TABLE II-14
EMPLOYED PERSONS 16 YEARS OR OLDER BY INDUSTRY, 1980

<u>Industry</u>	<u>Block Group 1</u>	<u>Block Group 2</u>	<u>Block Group 3</u>	<u>City Total</u>	<u>% of Total</u>
Agriculture	5	0	22	27	1.5
Construction	0	37	43	80	4.5
Manufacturing	82	162	58	302	17.2
Transportation	41	53	76	170	9.7
Communications	0	7	25	32	1.8
Wholesale	11	26	98	135	7.7
Retail	11	94	154	259	14.7
Finance, insurance and real estate	23	13	206	242	13.7
Services	95	180	104	379	21.5
Public Administration	<u>0</u>	<u>61</u>	<u>74</u>	<u>135</u>	<u>7.7</u>
Total	268	633	860	1,761	100.0%

Source: 1980 Census of Population and Housing, Summary Tape File 3A.

III. LAND USE

INTRODUCTION

The land use patterns in Emeryville are a reflection of both historical and current relationships among the city's economic, social and cultural elements as they are manifested in a physical pattern. This section describes the actual pattern, both historical and current, as well as analyzes the relationship between land uses. These relationships are positive when they are conducive to growth or supportive of other community and objectives. At the same time, the relationships can also be negative, resulting in conflicts between uses that must somehow be resolved. The conditions which have created the city's land use patterns are dynamic, creating an atmosphere where significant change can and is occurring. A discussion of these conditions is included in this land use analysis followed by some conclusions about directions Emeryville's planning process should take in dealing with the various community development issues. This section satisfies the state planning law requiring local jurisdictions to document issues associated with the general distribution and extent of their land use activity (Government Code Section 65302(a)).

LAND USE PATTERNS

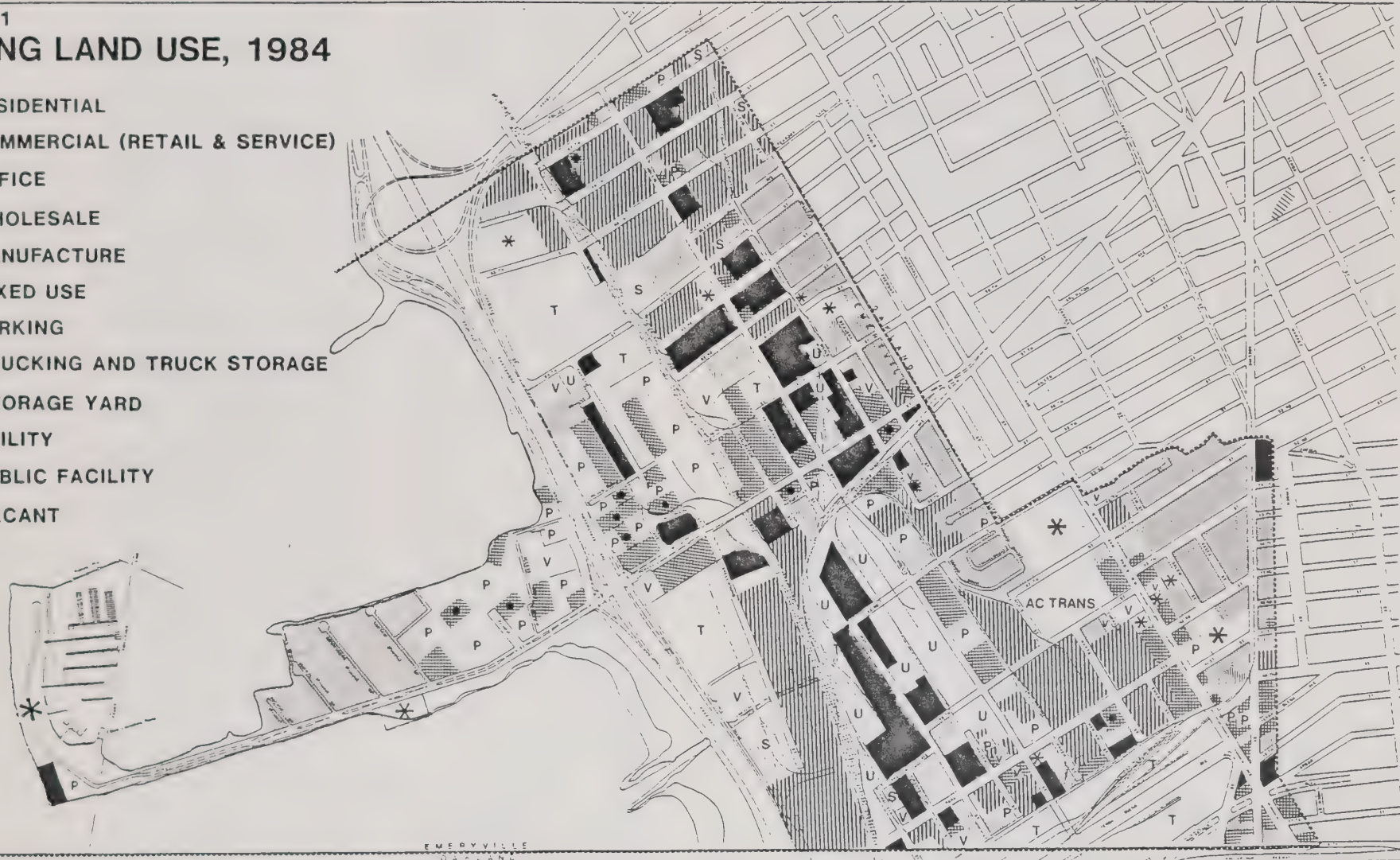
Historical Patterns. At the time of the Bay Area's first European settlement, in the early 19th century, Emeryville was part of a large Spanish land grant and was used primarily for raising cattle. The city's first commercial development occurred later that century when Joseph Emery subdivided the old land grant into large residential estates or ranches. Several years later when the railroad was constructed along the bay's shore, the city's bucolic land uses gave way to more industrial activities that were dependent on the railroad lines for receiving raw materials and shipping finished goods. Incorporation took place in 1896, carving out Emeryville as a jurisdiction separate from Berkeley and Oakland, allowing people to set up advantageous conditions for the city's most prominent feature at that time, a large race track.

Current Patterns. While the race track no longer exists, Emeryville's key location in terms of rail and highway access and its proximity to the region's major centers of commerce has continued to be attractive to manufacturing and other transportation-sensitive industries. The land portion of the city occupies 750 acres with 340 acres or 45% of the total land occupied by manufacturing and wholesale activities, and 98 acres or 13% by residences. Development patterns, building types, railroad tracks, and Interstate 80 divide Emeryville into three subareas: the Peninsula, the Bayfront and East Emeryville. Within these subareas, the land uses tend to occur in discrete bands. Figure III-1 shows the city's land uses; Table III-1 summarizes the acreage of each subarea by use. A brief description of the subareas' predominant land use patterns is presented below.

Figure III-1

EXISTING LAND USE, 1984

- RESIDENTIAL
- COMMERCIAL (RETAIL & SERVICE)
- OFFICE
- WHOLESALE
- MANUFACTURE
- MIXED USE
- P PARKING
- T TRUCKING AND TRUCK STORAGE
- S STORAGE YARD
- U UTILITY
- * PUBLIC FACILITY
- V VACANT



EMERYVILLE GENERAL PLAN

SEDWAY COOKE ASSOCIATES

Urban and Environmental Planners and Designers

scale in feet 0 200 400 600 800 1000 2000

TABLE III-I
EXISTING LAND USE, 1980

<u>Land Use</u>	<u>Acreage</u>	<u>%</u>
Manufacturing, warehousing, and transportation services	337.4	45.0
Residential	97.5	13.0
Office, retail, and commercial	75.0	10.0
Public facilities	13.6	1.8
Open space, recreation	75.0	10.0
Public rights-of-way	<u>151.5</u>	<u>21.0</u>
Total Land Area	750.0	100.0

Source: City of Emeryville, Final Environmental Impact Report on the Redevelopment Plan, August 1983, p. 32.

The Peninsula. The Peninsula comprises the entire land area west of Interstate 80 and consists entirely of bay fill. This area was originally a railroad pier built in the early 1900s. No solid land existed east of what is now the freeway until 1931 when a second pier was built just north of the first and the space in between was filled. Later that same decade, filling activity was resumed to construct the original marina. Between the 1930s and 1974, when bay filling became illegal, the Peninsula continued to grow and change shape on a regular basis.¹ During this time, the primary land uses were mostly recreational with some light industry. However, the Peninsula's prime location vis-a-vis the bay and the freeway made it a desirable setting for more intensive land uses. In the mid-1970s, an intensive redevelopment process began with construction of the Watergate apartment complex (later to be converted to condominiums), followed by construction of several highrise office buildings, a major hotel, and several freestanding restaurants. Today, little remains of the Peninsula's historic land uses. The marina is still there in a much expanded form, and a park at the Peninsula's tip is one of the city's only major recreation and open space areas.

The Bayfront. The Bayfront is a band of land wedged between Interstate 80 on the west and the railroad tracks on the east. Like the Peninsula, the Bayfront land uses have been strongly influenced by the area's proximity to the bay and the freeway. However, here the redevelopment process has been less intensive and less pervasive. There are several relatively new midrise office buildings and commercial businesses clustered around the intersection of Powell Street and Interstate 80. With the

¹ Doris Sloan, ed., *The East Bay Shoreline: Selected Environmental Issues*, June 1982.

exception of the Pacific Park Plaza condominiums, these buildings are surrounded by one- and two-story buildings accommodating many trucking, wholesaling and some manufacturing operations, ranging from the very small, with only one or two employees, to the very large, with over 500. Only a few business service activities that might serve the highrise office buildings are in operation, including two print shops and several graphic designers. In general, these more intensive office activities within the Bayfront exist in spite of the traditional land uses, i.e., the trucking terminals, wholesalers, and manufacturers with no mutual benefit or major conflict.

East Emeryville. East Emeryville encompasses a portion of the city east of the railroad tracks. This subarea has three major land uses that strongly contrast with each other. The first is manufacturing which also includes a smaller proportion of wholesaling and other business uses. Due to zoning restrictions, these activities are primarily contained between the railroad tracks and Doyle Street with a few exceptions along San Pablo Avenue and Adeline Street. The second major land use is the city's residential neighborhoods which start at Doyle Street in the North End, extend three blocks easterly to the city boundary, then south to encompass the "Triangle" formed by San Pablo Avenue and Adeline Street. The third major land use is the retail commercial strip along San Pablo Avenue and Adeline Street. While manufacturing and residential uses have remained relatively stable in East Emeryville, the nature of these uses is changing. For example, older industrial users like oil companies are being replaced by biotechnical research firms. This transformation is a different form of redevelopment than constructing new buildings to accommodate new land uses, as has occurred in the other two subareas. However, it also has significant implications for land use policy which will be discussed in more detail later.

MAJOR LAND USE CATEGORIES

The five major land uses in Emeryville are manufacturing, wholesale, retail/commercial, service/office, and residential. Each of these is disaggregated into smaller categories for a more fine-grained analysis of land use patterns. A major land use found in most cities but not discussed here is public land use, comprising several broad categories, including open space, recreation, and public buildings. Emeryville has virtually no public spaces except for schools and the marina and park on the Peninsula. Since the schools are not considered open space and the Peninsula is isolated from about half of the city's primary residential areas, these places cannot be counted as significant contributions to the overall public open space land supply. This is a significant deficit for the city and must be addressed in the context of the planning effort currently underway.

Manufacturing. Manufacturing has been Emeryville's primary land use for over a century. This sector also dominates the city's economy accounting for 42% of the total business establishments and 44% of total employment. Within the manufacturing sector in Emeryville there are six major subsectors including food, furniture, printing, chemicals and allied products, primary metals, and machinery, as well as a small but blossoming arts and crafts sector. There are several key factors that manufacturing businesses consider in selecting their plant location. One of the most important factors is location. Most manufacturing activities want to be close to either their source of raw materials or the market for their finished product. Because of Emeryville's location close to the geographic center of a large metropolitan region, it is a perfect location for firms with a broad market within the region. A second

factor that works in conjunction with location is transportation access. Emeryville's proximity to the region's major highways and railroad lines makes it easy for companies to transport supplies and finished products. A third factor is the supply of space available for manufacturing activities. Until recently, land and space in Emeryville were relatively inexpensive and readily available, making the city a particularly good place for firms starting up.

These same factors also play a role in influencing where within Emeryville firms might locate. For example, the vast majority of manufacturing firms in the city are concentrated in East Emeryville. The historical reason for this concentration is because firms wanted to be as close as possible to the railroad tracks. Another factor affecting intracity locational choices may be the relationship or linkage between firms. In an area with very large manufacturing activities, there are often many smaller firms that supply goods and services to the bigger operations. This pattern is very obvious in Fremont, for example, where many small companies supply parts to the General Motors plant. This type of relationship does not appear to exist in Emeryville. None of the five largest firms in the city including Grove Valve and Regulator, Judson Steel, Wonder Bread, Cutter Laboratories, and Cetus Corporation have a major supplier in Emeryville, nor do any have a major customer in Emeryville. This is also true for some of the middle size firms like the Pepsi Cola bottling plant or the Del Monte canning operation. Both of these have strong linkages to the glass and primary metals sectors but are not supplied by any Emeryville firms in these categories.

The future manufacturing land use pattern will depend a great deal on where each subsector is in its business cycle. The food and primary metals sectors are both in the declining end of the cycle. This means that the market for these products has peaked and begun to wane. A number of food processing and primary operations have already closed around California. Firms in these subcategories, like Del Monte and Judson Steel, have a high likelihood of closing in the near future. This would leave a considerable amount of space available for redevelopment either by other manufacturing firms or different land uses.

The machinery and parts subsector and the chemical and allied products subsector are considered mature industries in that their markets have probably reached their peak size. Firms in this category are still healthy but they are not expanding and are likely to begin declining over the next five to ten years, unless they modify their product lines to satisfy a changing market. Pfizer Chemical's operation is probably the best example of a mature industry.

Growth industries, i.e., companies with rapidly expanding markets, are also visible in Emeryville. These companies are likely to occupy space vacated by the declining industries, as well as creating pressure for new space to meet their different needs. The biotechnology research companies typify the new growth industries. The new industries often have very different space requirements than the old manufacturing firms and they are not as transportation dependent since their goods are generally small and light weight. Instead, other amenities including retail shops, restaurants, and open space have replaced some of the more traditional factors in location decisions.

Another important growth industry is Emeryville's burgeoning arts and crafts community. This group includes everything from furniture makers to painters and sculptors. While fine arts and crafts people are not manufacturing industries in the conventional sense, they are included here because they have special spatial

requirements related to producing a specific type of product. Like the conventional manufacturing operations, arts and crafts people need inexpensive space where they can work, and sometimes live, without disturbing anybody. Because these activities often require power tools and/or noxious smelling substances, the location of these small businesses are not appropriate for residential or even commercial areas.

The arts and crafts industry has played an important role in Emeryville's redevelopment process. It was among the first to reuse the large industrial facilities that have been vacated by traditional manufacturing firms. Attracted by inexpensive rents, the loft spaces and good proximity to UC Berkeley, many of these arts and crafts people created a market for space in restored buildings. This demand has increased the pace at which buildings are being renovated and helped smooth the transition between the older industrial land uses and the new more modern ones.

Unlike other manufacturing activities, the arts and crafts people have tended to cluster in specific areas of the city. This spatial concentration is a result of where space has been available and the natural tendency for artists to congregate. The community that has developed as a result of this concentration has become a unique part of Emeryville's cultural life. In the future, as space in the old manufacturing building becomes more desirable for office uses, there will be increasing pressure to displace the arts and crafts people with activities capable of paying higher rents. However, this community's contribution to Emeryville's culture and diversity are as important as those of any other residents and small business people. Therefore, future land use policies should incorporate methods for preserving this community whenever possible.

Wholesaling. Wholesaling is another major sector in Emeryville from both a land use and an economic perspective. About 25% of the business establishments are in wholesaling and account for 11% of the city's total employment. Like manufacturing, this sector comprises a broad spectrum of activities and land use requirements. However, for the purpose of this analysis, wholesaling includes trucking, warehousing/distribution, and manufacturers' representatives.

Trucking and warehousing/distribution are both very space intensive and reliant on good transportation access. Therefore, the city's comparative advantages regarding these factors have attracted many trucking and warehousing businesses. Most of these firms are concentrated in the Bayfront where they occupy much of this area's prime land. The large trucking companies, in particular, are directly adjacent to the freeway and are not crowded by the manufacturing operations clustered along the east side of the railroad tracks.

These two activities, more than any others in the city, are being displaced by completely different land uses as part of the city's redevelopment. There are two main reasons for this phenomenon. First, these industries require a lot of land but not a lot of investment in buildings or machinery. Consequently, they are very sensitive to land costs. If land costs increase dramatically, as they have in the Bayfront, trucking and warehousing quickly become inappropriate and will be displaced by higher and better land uses. Both trends are already affecting most of the trucking businesses in Emeryville. P.I.E. recently sold about half of its land holdings to one developer and another has been trying to put together a major residential project for the Delta and Garrett sites. Although nothing has happened on any of these sites, they will probably be redeveloped within the near future. Second, trucking and warehousing industries are undergoing a restructuring process all over the country where distribution points are being centralized in non-metropolitan areas. Much of the Bay Area's

trucking and warehousing businesses have moved to Sacramento or the Central Valley where land is cheaper and several metropolitan areas can be served from a central location.

Manufacturers' representatives are a very different type of wholesaling activity in that they are brokers who never actually handle the goods they sell. Instead of big warehouses, manufacturers' representatives require more conventional office space. These enterprises are more prevalent in East Emeryville where inexpensive office space is available. Because of their space requirements these businesses are not likely to be displaced by redevelopment unless office rents become too high.

Retail/Commercial. Retail and commercial activities, primarily personal services, are very dependent on being close and/or easily accessible to the population they serve. Some forms of retail and commercial activity benefit from being near residential areas while other activities tend to cluster near offices or other business establishments. In either case, the size of the population to be served is an important factor in determining the types of goods and services that are available. A population's disposable income is also a very important consideration to retailers. Because the residential population of Emeryville has historically been very small and was considered to have limited buying power, no major retailers, like supermarkets, chose to locate in the city. Except for a few corner grocery stores, most of Emeryville's retail and commercial enterprises are located on San Pablo Avenue or Adeline Street where they are accessible to Oakland residents and are visible to large numbers of drivers.

The Watergate complex with over 1,500 units is also too small to support more than a few stores. However, its residents have more disposable income than the people in East Emeryville so that it is considered a better location for stores. When the Watergate project was developed, a small local-serving shopping area was built to meet residents' basic needs with a small supermarket, a dry cleaners, and a few other shops. Now, with the construction of Pacific Park Plaza and an additional office tower, there is increased demand for retail and personal services around Watergate. Consequently, the shopping center is being expanded to accommodate 2,000-3,000 square feet of space for a restaurant and additional shops or offices. Because of poor access and some social differences, East Emeryville residents do not frequently shop at the Watergate shopping center.

Besides the San Pablo/Adeline commercial strip and the Watergate shopping center, there is one other cluster of retail activity in Emeryville: the Marketplace. This cluster of small shops and restaurants in several old buildings was supposed to be regional-serving with patrons coming from all over the East Bay. However, only a discount liquor store and the East Bay Vivarium tend to draw people from outside Emeryville. The remaining businesses are small restaurants that cater to lunchtime crowds generated by the city's daytime labor force which is approximately three times the size of the residential population.

Even with this small cluster of restaurants, most people who live and work in Emeryville feel that one of the city's biggest problem is its lack of eating and drinking establishments. When the Watergate III tower is completed in June 1985, Emeryville's daytime work force should increase by about 1,200 people. Estimating that these people typically generate about \$1.2 million in retail sales, the city could easily support another 13,000 square feet of retail space just to serve the daytime population. This does not include additional demand that will be generated by other redevelopment in the Bayfront area. However, additional restaurants and some new

specialty shops aimed at office workers will do little for the retail needs of city residents.

Services. The service sector has a very broad definition that has expanded in recent years to include most business activities that occur in highrise office buildings, including finance, insurance, real estate and professional services like lawyers. In Emeryville, these activities are concentrated in the highrise and midrise office buildings immediately east and west of Interstate 80. Although the tenants of these buildings may have no direct relationship to each other, the buildings themselves do have a relationship in that they create a distinct identity in the real estate market. If and when more buildings are built, particularly in the Bayfront area, Emeryville's identity as an industrial center will become increasingly less preeminent and the city's image as an office center will be enhanced. This enhanced reputation will help the marketability of all office space within the city.

Besides the overall real estate market conditions, concentrations of office buildings also generate demand for certain types of business services like print shops, delivery services, and machine repair people. Like retail and personal services, these business services require certain population densities and must be located in close proximity to their customers. Although the office density in Emeryville is not yet high enough to support a full range of business services, there are a few in the Bayfront area. If office development continues, more of these service businesses are likely to move into Emeryville. While these operations cannot afford the same rents as the offices they serve, these companies will probably be able to afford higher rents than are being paid by manufacturers and wholesale operations currently located in the Bayfront. Therefore, it is possible that even if their buildings are not demolished through redevelopment, many current Bayfront businesses could be displaced by changing market conditions, resulting from office development in the area.

Residential. Within Emeryville's three subareas, there are primarily three different housing types. The Watergate complex on the Peninsula represents a midrise garden apartment housing style with three stories of units over parking. These units are at a density of approximately 40-45 dwelling units per acre. In the Bayfront, the only housing type is Pacific Park Plaza's 30-story highrise tower. This building is not only a major departure from other housing types in Emeryville, it is also very different from most housing in the entire East Bay. The tower is approximately 100-110 dwelling units per acre, including the land area occupied by the parking structure.

There is a little more diversity in East Emeryville's housing styles. Detached single family houses comprise the majority of the housing stock (34%). There is also a scattering of duplexes, fourplexes, and other lowrise apartment buildings, but these rarely have more than five units or are more than two stories high. Most of these buildings date from the 1950s and 1960s. In the last several years, very little new construction has taken place in East Emeryville, and what has been built is in a townhouse or "urban village" style, e.g., Emery Bay Village. These newer units probably reflect a building trend that can be expected to continue throughout the decade. This construction style averages about 20 dwelling units per acre.

Ongoing issues regarding housing in East Emeryville will continue to focus on housing production as well as upgrading the condition of the existing housing stock. Also, if new office and retail development in the Bayfront occurs on a significant scale, it is possible that there will be some gentrification in the older residential neighborhoods, causing housing costs to increase and displacing long-time residents.

LAND USE CONFLICTS

Land uses can be complementary as well as conflict. These conflicts can take a variety of forms and generally occur when different land uses exist in close proximity and where one use infringes on the environmental quality of the other. The land use conflicts in Emeryville are divided into three major categories, including visual conflict, noise, and noxious odors. There may be additional problems but a visual analysis and land use survey of the entire city indicated that these three are the most serious and pervasive. The types of conflicts and their locations are shown in Figure III-2.

Visual Conflicts. The most common visual conflict occurs in locations where two adjacent and very different land uses have no buffering or intervening use between them. This type of problem occurs along Doyle Street from Ocean Avenue at the north end to the street's southern end, because it delineates a major transition between residential uses on its east side and industrial uses on its west side. Consequently, many houses face directly onto heavy manufacturing operations. A second area where visual conflicts exist is the commercial strip along San Pablo which abuts a residential area. This strip, which serves a regional market, attracts considerable vehicular traffic that bears no relationship to the residential area behind it. The nature of all strip development is visually unappealing and its auto orientation, clutter of street signs and lights, and population density are not particularly compatible with a low density residential neighborhood.

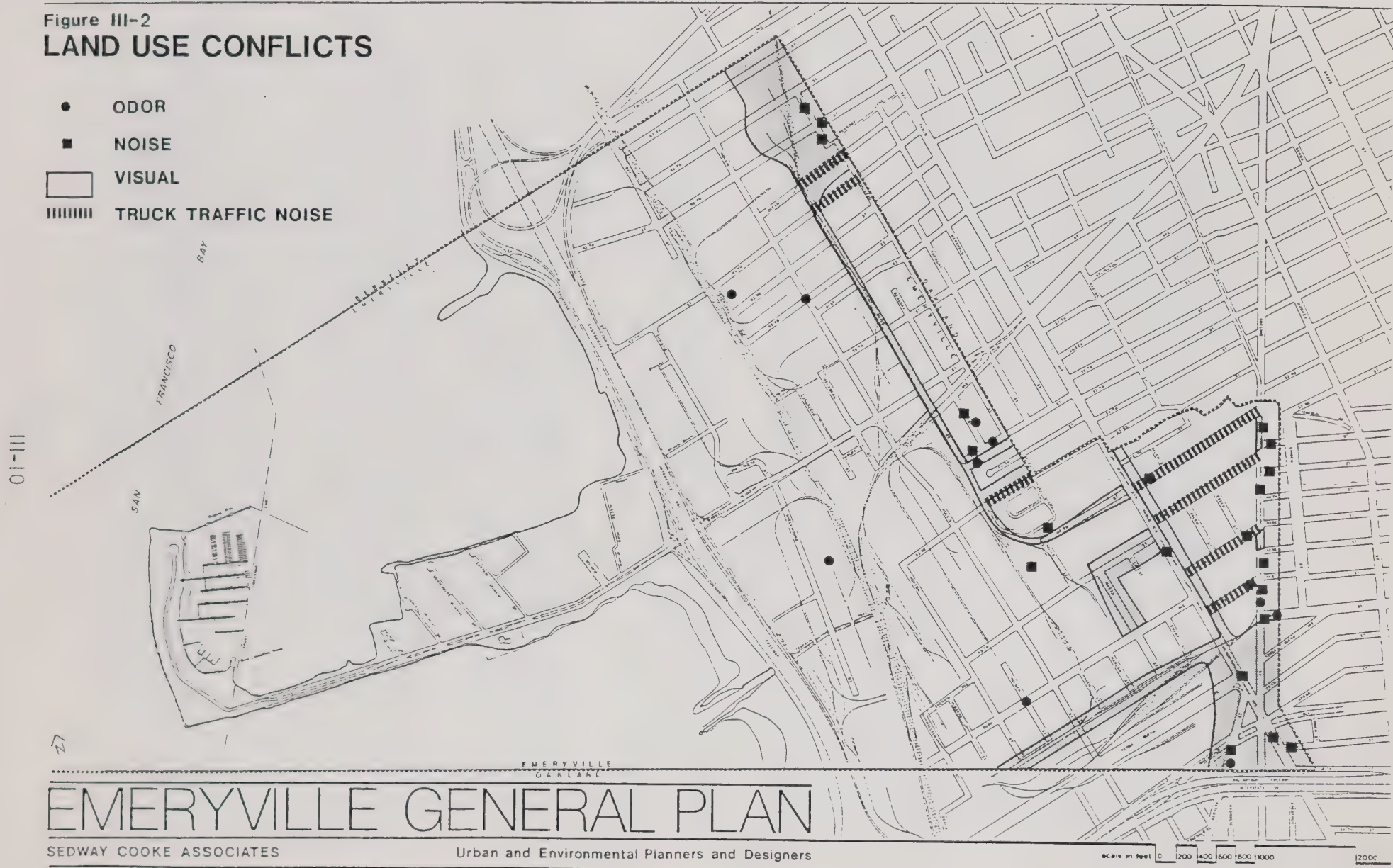
Smaller areas of visual conflict also exist along Adeline Street where commercial and industrial land uses are inappropriately intermixed. Also, the city's entire southeastern tip, including the stretch along the railroad tracks, is a chaotic mix of uses where visual conflict and blight are among many physical conditions requiring attention.

Noise. Industrial areas, besides producing negative visual impacts, create other problems including excessive noise. In Emeryville, which is a small area, there are roughly 22 places where manufacturing activity creates noise levels that disturb adjacent residential neighborhoods. These locations are shown in Figure III-2. One major noise source is Pfizer Chemical which can be heard by many city residents, although it is not near a residential neighborhood. Another noise source that impacts Pacific Park Plaza residents is the Silks nightclub. In addition to the operational noise generated by manufacturing activities, the city's manufacturing, trucking and wholesaling businesses often involve intensive trucking activities to transport materials or finished products. Because of the organization of the city's land uses, trucks often must traverse residential neighborhoods to reach their destinations. The noise and safety hazards imposed by this traffic are inappropriate and detrimental to the environmental quality of the city's residential areas.

Odors. While there are few sources of noxious odors in Emeryville, the problem can be pervasive under certain weather conditions. The visual and land use survey performed by Sedway Cooke Associates in October 1984 identified eight areas where unpleasant odors were present. One source identified by many residents in the North End is the Peterson Rendering Company located at 62nd and Hollis Streets.

Figure III-2
LAND USE CONFLICTS

- ODOR
- NOISE
- VISUAL
- ||||| TRUCK TRAFFIC NOISE



EMERYVILLE GENERAL PLAN

SEDWAY COOKE ASSOCIATES

Urban and Environmental Planners and Designers

Scale in feet 0 200 400 600 800 1000

1200'

POTENTIAL LAND SUPPLY FOR DEVELOPMENT

Land use patterns are dynamic with change occurring at varying rates, depending on numerous factors both internal and external to any given land use. No land use analysis is complete without examining some of the factors that could create change and the implications these have for a particular area. Perhaps the single most important factor affecting change is economic conditions, particularly for non-residential land uses. Short- and long-term business cycles, shifting market patterns and changing technology can all impact the viability of a business and thus change its requirements for land. Real estate conditions can also fluctuate, driving rents either up or down, making an area more or less affordable for different types of land uses. This section examines the availability of land for reinvestment or redevelopment. The market forces affecting the demand for this land are described in Chapter IV.

Land Utilization. Because the factors affecting land use are numerous and complex, it is helpful to establish a simple measure for assessing potential change against which other factors can be weighed. One widely used measure is the ratio of investment, or improvements, on a given piece of land to its land value (I/L ratio). It gives an indication of how much the improvements, e.g., buildings, are worth relative to the value of the land. Using information available to the public from the county tax assessor, the ratio is calculated by dividing the assessed value of any individual parcel improvements by the land value. If the improvements and the land are worth the same, the I/L ratio equals one. If the improvements are worth twice as much as the land, the ratio equals two, and so on. Generally, when the improvements are worth less than the land, the property is more valuable for its potential rather than its current use. Therefore, market forces begin asserting pressure, and the land is likely to be sold or redeveloped for a more intensive use more commensurate with the land value. Since passage of Proposition 13, property taxes are based on 1978 assessment values which are allowed to increase by 2% each year. A parcel can be reassessed at its full market value only when it is sold. If the assessed land values were inflated to reflect their current market value, the I/L ratio would be lower and many more parcels would be in the underutilized category than appear now.

The I/L ratios for all nonresidential parcels in Emeryville are shown in Figure III-3 and summarized in Table III-2. Patterns emerge in different areas of the city, highlighting where change is likely to occur, where it has already occurred, where it might occur five years from now, and what the exact land supply will be for each category.

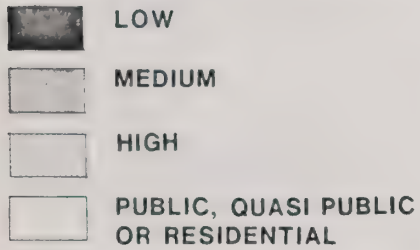
TABLE III-2
LAND UTILIZATION BY SUBAREA (acres)

	<u>Peninsula</u>	<u>Bayfront</u>	<u>East Emeryville</u>	<u>City Total</u>
Underutilized	40.8	74.1	88.7	180.7
Marginal	0	16.2	44.3	60.5
Stable	59.5	30.2	84.4	174.1

Source: Sedway Cooke Associates, 1984.

Figure III-3

LAND UTILIZATION (NONRESIDENTIAL LANDS)



* MAY BE SUBJECT TO PRIVATE ACQUISITION; THEREFORE,
SITE WOULD BE CONSIDERED HIGHLY SUSCEPTIBLE FOR
REINVESTMENT.

III-12



EMERYVILLE GENERAL PLAN

SEDWAY COOKE ASSOCIATES

Urban and Environmental Planners and Designers

scale in feet 0 200 400 600 800 1000 1200'

Underutilized Parcels. Parcels with a ratio of less than 0.90 are the most likely to undergo immediate change. They are often typified by businesses in the declining phase of their business cycle and where land values have begun to rise as Emeryville has begun to attract more intensive development. This has already begun to happen in the Bayfront area. For example, the Days Inn motel is currently being built on a site that had a low ratio. Also, the Delta and Garrett Truck Company sites have been bought or are under option to a developer planning to build high density housing. As described earlier, many wholesaling distribution operations have found it more cost-effective to centralize their distribution points in non-metropolitan areas where land is less expensive. It is these parcels that can be considered as the land supply available for redevelopment. Other locations that are expected to be available include lands owned by utilities and transportation companies, such as PG&E and Southern Pacific, respectively. PG&E controls 13.5 acres of prime land along Hollis Street near the Old Town Hall. Southern Pacific owns a considerable amount of land along Yerba Buena Avenue that is currently used by some trucking companies, primarily as storage areas.

In some cases, a low ratio can be deceptive, underscoring the importance of knowing real estate market conditions and local economic circumstances as well as the I/L ratios. An example of this situation can be found on a parcel on Hollis Street between 62nd and 63rd Streets. A development group very active in Emeryville purchased this site within the last several years and converted it to live/work space. Although there are no current plans to change or upgrade the building, it is possible that if other buildings in the immediate area are upgraded and rents increase significantly, this building could also be converted to a higher use. Under these circumstances, the live/work activity probably should only be viewed as an interim use only. On a parcel like this with a very low ratio, some change has already occurred, i.e., purchase by a new owner, but more significant changes probably will not occur in the immediate future.

Marginal Parcels. Those parcels with ratios of 0.90 to 1.40 have improvements valuable enough to sustain their current uses under present market conditions. Fewer are for sale than those with lower ratios and many buildings that are sold are rehabilitated instead of demolished. Most buildings with ratios of 1.11 to 1.40 are older structures possessing intrinsic aesthetic quality, making them good for adaptive reuse.

In an area like Emeryville where there is considerable development activity, property values are beginning to increase considerably. Based on the limited information available from recent land sales, property appears to be selling at about three times its assessed value. If the land portion of the parcel's assessment were inflated to reflect this increase, then the ratios on all property in the marginal range would drop into the underutilized category. This indicates that with changing market conditions, properties now considered relatively stable could become underutilized, paving the way for some form of reinvestment and land use change. However, because most of the buildings on parcels in this range lend themselves to adaptive reuse, very few will be removed to make room for new structures. Consequently, building square footage, rather than land acreage, is more representative of the development potential of the marginal parcels.

A conservative estimate of floor space available within properties with an I/L ratio of 0.90 to 1.40 is 1.55 million gross square feet. Many of the buildings are large and if remodeled, could accommodate several floors of new smaller-scale business activities. On the other hand, some of the buildings are in poor physical condition or are unsuitable for reuse. This level of information will be collected when the land use alternatives are developed in the next step of this planning effort.

Stable Parcels. Parcels with ratios greater than 1.40 have generally incurred some form of reinvestment within the last five or so years. Many buildings with ratios between 1.40 and 2.00 have already undergone some rehabilitation which has elevated them from the marginal category. A considerable amount of this activity has begun to occur on Horton Street from 45th Street north to the railroad tracks. Many of the parcels with ratios in the 2.01-4.00 range are newer buildings built between 1960 and 1970, like the large warehouse facility to the north of Pfizer Chemical. Most parcels with ratios over 4.00 have new buildings on them built in the last ten years. Only in a few instances have older buildings undergone enough rehabilitation to be valued at a ratio of over 4.00. Most notable of these are the buildings occupied by Cetus that were upgraded to incorporate the laboratory requirements of the biotechnology industry. In terms of long-range land use planning, all parcels in the stable category can be expected to remain in their existing physical form if not their current land use.

CONCLUSIONS

This analysis of Emeryville's existing land uses shows that by looking at the physical land use pattern over space, the interrelationship between uses (both positive and negative), and market conditions as reflected by I/L ratios, it is possible to develop a detailed picture of current conditions as well as possible scenarios for the future. Such an analysis can help the city set goals and objectives that are proactive in that they respond to anticipated changes and are implementable. Land use patterns also reflect the city's economic vitality and viability as well as create a framework for social and cultural structure. Any future plans for changing or enhancing these elements of Emeryville's life must be reflected in and supported by land use policies to ensure that the appropriate physical space will be available to meet the requirements. A summary of the city's overall land use patterns will help clarify some of the issues that must be considered as the city's overall goals, objectives and policies for land use control are formulated.

Land Use Summary. Within the last ten years, the Peninsula has undergone the most radical and intensive change of any area in Emeryville. The development intensity of the residential use and the highrise office buildings are a total break from the city's historical land uses and economic activities.

The Bayfront area is also undergoing a transformation as old and underutilized structures are being demolished to make way for new higher-intensity uses. So far, most of the redevelopment has been concentrated west of Christie between Powell and 64th Streets with new land uses developing south of Powell only in the past year. This development activity is creating considerable concern for the older businesses that are more representative of Emeryville's historic economic base. Many people from this group of businesses have expressed an interest in staying in Emeryville but are concerned about increasing rents or about their landlords selling the building. Many of these uses, including some heavy manufacturing, are highly incompatible with the newer land uses in terms of both noise and visual conflict.

Land use patterns are also changing in the industrial section of East Emeryville. However, this change is more a shift from older manufacturing activities that require large floor areas and heavy machinery to new businesses ranging from research and development to arts and crafts people. The large spaces are being subdivided to accommodate a myriad of new types of businesses which are not incompatible with

the older manufacturing but are significantly different. Very little new construction is occurring in East Emeryville; instead buildings are being rehabilitated to accommodate their new users. As a result, the area has maintained its scale and physical form as well as its diversity.

The city's residential neighborhoods are relatively stable when compared to the non-residential areas. There has been very little infill development and although there are still some vacant parcels, there are no current plans to build anything significantly different from the current land use patterns in these areas. A major problem with the residential neighborhoods in East Emeryville is the age and general condition of the housing stock. The city has been involved in helping residents rehabilitate their homes within its target areas and is expected to begin extending its services in the next year.

Land Use Issues. Two key land use issues that will play major roles in the future development of the city involve the changes in the city's economy and the implications for the existing stable uses.

Relationship between Emeryville's Land Use and Economic Conditions. A major goal of the city is to foster economic growth which will maintain the city's vitality, allow for funding of necessary infrastructure improvements like roads and sewers, and upgrade the city's image. Because the city is in such a favorable position in terms of its regional location and proximity to the bay, there is enough interest in private redevelopment that Emeryville will almost certainly attain these goals in the long term. However, some negative side effects will result in the transition process. Every effort should be made to communicate these side effects to the citizens and let them choose the types of trade-offs they are willing to make to accommodate change.

The most significant side effects of redevelopment, particularly in the Bayfront, will be the displacement of many businesses that would prefer to stay in Emeryville. While some of the bigger and older heavy manufacturing operations are no longer appropriate for as urban a location as Emeryville, many of the businesses that would be displaced would be compatible with the city's changing image. As a way to retain these businesses which would serve to maintain both economic stability and diversity within the city, it may be appropriate to consider a program of consolidating these existing businesses in areas that will not be as directly affected by the redevelopment process. This might entail helping to relocate business in existing space in East Emeryville. If appropriate space does not exist, then perhaps a public and/or private redevelopment effort could be made to build new space or rehabilitate old space specifically for this purpose.

Another possible problem would be development that is heavily slanted towards offices. If the vast majority of new development is devoted to this use, it could actually cause an economic decline because much of it could sit vacant for long periods of time. Also, from the city's standpoint, it should not become too dependent on a single industry or group of industries that respond to the same business cycles; otherwise an economic downturn could create significant declines in tax revenues as well as create unemployment and potential massive economic dislocation.

In order to maintain economic diversity, Emeryville must concentrate on attracting a variety of businesses and helping to foster new start-up firms whenever possible. In the past, the city has been very fortunate in that it has attracted elements of the biotechnology industry, which is a growing field, and has also served as an incubator

for new firms. An effort should be made to examine the reasons for these successes and strengthen the necessary land use policies that will ensure continued success.

Ongoing Land Use Conflict Problems. Because Emeryville is so small and intensely developed, there is little room for transition zones or buffers between conflicting land uses. As the traditional land use pattern is transformed, there will be some opportunity, through adoption of urban design policies, to counteract some of the current problems. For example, the Bayfront Specific Plan can initiate design guidelines aimed at stepping down building heights from the towers along the freeway to the lowrise scale prevalent in East Emeryville. Also, increasing land values and rents will probably force most of the older, dirtier manufacturing activities out of Emeryville, eliminating some of the most obvious visual land use conflicts.

However, the new land uses coming into the city also create new types of land use conflicts. Some of the so-called "clean" industries have been found to have adverse environmental impacts, like groundwater contamination from underground storage tanks, that are much more insidious than visually unpleasant surroundings. Moreover, if office workers were to become a significant part of the work force in areas now predominantly industrial, they could assert political pressure to try and eliminate the industrial activities in order to encourage a more aesthetic visual setting. Before this happens, Emeryville should make some decisions about how industrial activities could be preserved in the face of increasing office development and what steps should be taken to buffer the two uses from each other. In addition, with the introduction of more intensive land uses, the need for parking facilities to accommodate greater vehicle use becomes important. The location and design of these structures can enhance or diminish the living environment for surrounding uses.

IV. REAL ESTATE MARKET

INTRODUCTION

The prevailing real estate market conditions in Emeryville, the East Bay, and the San Francisco Bay Region will strongly affect the price and scale of future development in Emeryville. Consequently, it is useful to examine the existing and future conditions in the real estate market for the five major types of land uses that will be constructed: office, hotel, residential, industrial, and retail. This market overview is intended to ensure that the proposed general plan uses in the city are reasonable with their demand. The approach to assessing current real estate conditions includes describing the general market conditions in the region and examining projects considered comparable, in terms of location, scale and density, to what might be built in Emeryville.

HOUSING

For the last ten years, the Bay Area's expanding economy and changing demographic patterns have created tremendous demand for housing units. This demand has far outpaced supply in the region's most intensely developed areas because of limited land supply. Consequently, most housing production has occurred on the urban fringe where land is more plentiful. But these outlying areas often require long commutes into the region's job centers, including downtown Oakland and San Francisco, making land within close commuting distance highly desirable for residential development.

Land supply, land costs, and other market factors affect the housing type a developer will build in particular project. These housing types vary from detached single family units at the low density end to highrise apartments at the high end of the scale. In less urbanized areas, the predominant housing form is the detached single family home, whereas on urban infill sites where land costs are much higher, developers build low- to midrise attached units. Along the East Bay shore where residential building sites are at a premium, recent housing projects have all been low- to midrise attached units. These projects have been designed as self-sufficient communities with numerous special amenities, e.g., health spas, tennis courts, and swimming pools; and are aimed at the young urban professional market. Efficient use of the limited land supply in Emeryville suggests that new residential development follow this East Bay trend towards constructing high density attached units. Consequently, this market review only discusses the market conditions for comparable projects in this building style.

In the early 1980s when interest rates were very high and financing for conventional homes was difficult to obtain, many people purchased medium density attached units as an alternative to single family homes. Generally, the prices on these units were lower with financing available through the developers. The Watergate complex is a good example of how well this type of unit was doing in the market. In 1979 when it was converted from apartments to condominiums, the developer sold over 1,000 units in 90 days, an average sales rate of 11 units per day. By 1983, interest rates began to ease up, giving people more flexibility as to the kind of units they could buy. Most prefer single family houses, so when it became easier to buy this type of unit, most

consumers did so. Also, in the past few years, real estate in general has not appreciated at the rate it did in the late 1970s. As a result, people who bought higher density units for investment purposes found that they were not able to get high enough resale prices to realize a reasonable return.

The actual market for mid- to highrise attached units in Emeryville and in comparable locations remained relatively strong through the first quarter of 1984. The largest, most visible East Bay project, the Pacific Park Plaza in Emeryville, began marketing units in April 1983. At that time, there was tremendous response to the project and the targeted sales rates were being met. However, Pacific Union was marketing its units based on the assumption that its master plan for the immediate area around the tower would be approved. The plan was rejected by the city, creating considerable uncertainty for prospective buyers. Table IV-1 illustrates projects, including the Pacific Park Plaza, comparable to those likely to be built in Emeryville. These projects were chosen because all are in the East Bay, are adjacent to the Bay, have good transportation access, and are similar in physical form (except for the Pacific Park Plaza tower). Although this is too small a sample to provide statistically significant information about the East Bay residential market, it does demonstrate some possible trends. One trend is that bigger projects, like the Pacific Park Plaza and Portobello, seem to sell better than smaller ones. Second, location is important, with projects closer to San Francisco and downtown Oakland selling between three and four times as many units as more remote projects. Third, lowrise buildings appear more popular than towers. Finally, price is not a big factor among these projects, as units at Bridgewater, even though less expensive, are not selling as quickly as Portobello's.

An important consideration for units being built in Emeryville is their attractiveness to families with children. Bridgewater is within walking distance of an elementary school and the prices are affordable enough for families with only one child. The UA Co-Op was designed specifically for families with children, and all units with more than one bedroom are occupied by families. The lowrise buildings surround an internal courtyard, so that it is easy to supervise children playing outside. At four of the other projects, families with children account for under 10% of the total residents. These projects have a smaller proportion of 2-bedroom units and have no other conveniences for children like proximity to schools or appropriate play areas. Brickyard Landing is not completed, so that no information exists concerning the number of families who live there.

Although recent market conditions have not dictated strong condominium sales throughout the East Bay, this segment of the housing market will continue to meet an important amount of the region's total demand. Successful condominium projects will rely on locational factors as well as design and layout to create an "urban village" atmosphere, including amenities for recreation. If a condominium project can meet these criteria, then even under weak market conditions, an absorption rate of 9-12 units per month is likely.

TABLE IV-1

COMPARABLE RESIDENTIAL PROJECTS FOR THE EMERYVILLE MARKET

<u>Project</u>	<u>Location</u>	<u>Total Units in Project</u>	<u>Year Built</u>	<u>Unit Size (sq. ft.)</u>	<u>Unit Price (\$ 000s)</u>	<u>Building Height</u>	<u>Amenities</u>	<u>Average Monthly Sales (# of units)</u>
Brickyard Landing	Richmond	241	1984-85	900-1,608	123.5-289	4 stories over parking	pool, recreation center, tennis	4.5
Albany Gate View	Albany	480	1978	750-1,113	80-120	n/a	location	n/a (only units available for resale/takes 6 mos to sell)
Bridgewater	Albany	27	1983	n/a	130-165	3 stories	bond finan- cing scale, park-like surrounding	2.2
UA Co-Op Homes (limited equity co-op)	Berkeley	47	1983	900-1,400	n/a	2 stories	affordabili- ty, location	n/a (600 people on waiting list for units)
Watergate	Emeryville	1,247	1970-74	470-1,250	55-300	3 stories over parking	location, view, sports facilities	n/a (only units available for resale, 20 units of mkt)
Pacific Park Plaza	Emeryville	583	1983	650-1,550	115-375	30 stories	location, secur- ity, lifestyle	12
Portobello	Oakland	200	1983	485-1,300	150-250	3 stories	location, tennis courts, marina, health club	17.5

Source: Sedway Cooke Associates

RETAIL

Retail space tends to locate in shopping centers, and the size of the center corresponds directly to the size of the population from which it draws customers. According to industry standards, there are three main shopping center types, each of which serves a different size population and has a different mix of merchandise (see Table IV-2). In assessing the market conditions for retail space, developers not only consider the size of the population to be served but also the disposable income of the population and competition from other centers.

TABLE IV-2
TYPICAL SHOPPING CENTER CHARACTERISTICS

<u>Type of Center</u>	<u>Primary Tenant</u>	<u>Typical Gross Leasable Area (x000 sq. ft.)</u>	<u>General Range in Gross Leasable Area (x000 sq. ft.)</u>	<u>Minimum Support Population Required</u>
Neighborhood	Supermarket or drugstore	50	30-100	2,500-40,000 people
Community	Variety, discount, or junior department store	150	100-300	40,000-150,000 people
Regional	One or more full-line department stores of at least 100,000 sq. ft. of gross leasable area	400	300-1,000 or more	150,000 or more people

Source: Urban Land Institute, Shopping Center Development Handbook, Washington D.C., 1977.

Neighborhood Commercial. Neighborhood commercial centers carry mostly convenience goods--items consumers need immediately and will shop for at the most convenient location. Food, drugs, and sundries are typical convenience goods. These centers usually draw customers from a 1.5-mile radius or six-minute drive, and usually feature a supermarket as the prime tenant. The disposable income of the trade area population and the competition affecting a neighborhood center must be considered on a case-by-case basis.

Emeryville currently has only one neighborhood commercial center. The Watergate center, built in the mid-1970s, has approximately 13,000 square feet, with the Piedmont Market as its anchor tenant. Other tenants include a print shop, dry cleaners, beauty shop, pharmacy, and bank. When the center was first built, its trade area only included the 1,500 people living in the Watergate complex. East Emeryville residents were not considered part of its trade area for two reasons: first, they were over a mile away, and second, there was a perceived socio-economic difference between East Emeryville and Watergate, making it unlikely that East Emeryville residents would shop on the Peninsula. Watergate's initial population alone was not enough to support this center, and it became profitable only in the late 1970s when completion of the two office towers increased the trade area's daytime population to 2,900. When the third office tower is completed in June 1985, the center's trade area population will increase by about 1,200. Anticipating this growth, the owner has begun constructing an additional 3,000 square feet for a restaurant, and shops or offices.

Local-serving shopping facilities in East Emeryville include a few corner grocery stores and some commercial activity along San Pablo Avenue and Adeline Street. However, there are no supermarkets or drugstores offering a full range of convenience goods. People must drive several miles to either Berkeley or Oakland to fulfill their everyday shopping needs. The East Emeryville population was about 2,200 in 1980, which is just under the critical trade area required to support a neighborhood center. Combined with the residential population in Oakland just east of San Pablo Avenue, there are definitely enough people within a 1.5-mile radius to support a neighborhood shopping center. The problem with this area is that the buying power is probably quite limited. While it is difficult to get an exact estimate of buying power, a good indicator is median household income. The median household income for Alameda County in 1980 was \$18,700. In northeast Emeryville, the median income was \$16,000; in the Triangle, it was \$10,359; and in the Peninsula, it was \$22,023. Thus, the two eastern residential neighborhoods--with median incomes 86% and 55%, respectively, of the county's median--do not have strong buying power and are probably too limited to be attractive to potential developers. The Peninsula with 118% of the median is a much stronger trade area.

As redevelopment occurs in Emeryville's Bayfront area, a third market for neighborhood commercial activity will develop. Although the alternative development plans are not complete, office development will create an estimated 7,300-9,800 new jobs, and residential development will create an estimated 1,800-2,500 new housing units. Because about two-thirds of this new daytime/residential population will be office workers, the retail mix for this market will be different than for a purely residential area--probably more oriented towards restaurants and specialty shops. Studies of office worker spending habits indicate they spend about \$1,000 on retail goods a year

near their place of work, with about 65% going for food and 35% for other goods.¹ Using industry standards to establish sales per square foot of space,² it is estimated that office workers alone will generate a demand for about 41,000-55,000 square feet of food service activities, including sit-down restaurants and fast-food outlets, in addition to about 33,000-44,000 square feet of specialty shops.

The Bayfront's new residential population will probably be much larger than the current population of either the Peninsula or East Emeryville. The Association of Bay Area Governments (ABAG) projects the average household size in Emeryville will be about 1.73 people by 1985. This number will probably be lower in the Bayfront area because units will be smaller and most will have only one bedroom. Therefore, the average household size will probably be closer to 1.5. With 2,500 units and an average of 1.5 residents per unit, the total Bayfront population could be as high as 4,600 including Pacific Park Plaza residents. Assuming that the income range of these residents is similar to the Peninsula's, this population will be affluent enough to support a traditional neighborhood retail center of about 40,000 square feet. The preliminary plans for this area also include 400-500 hotel rooms which would generate an additional demand for 10,000-20,000 square of retail including restaurants. This would bring the total Bayfront's retail market potential to 85,000-120,000 square feet.

Community Center. Community shopping centers are about twice the size of neighborhood centers and feature a larger variety of merchandise. These centers can incorporate all the features of a neighborhood center, but also have specialty goods such as shoes and clothing that take more time and effort to select. The prime tenant in a community center is usually a junior department store or a large variety store. The trade area tends to be within a 3- to 5-mile radius or a 10-minute drive.

Community retail centers are becoming increasingly unusual in large metropolitan areas because they cannot compete with regional shopping centers. The best example of a community center in the East Bay is downtown Berkeley where both junior department store and a full line department store have had difficulty. J.C. Penney's is only marginal and Hink's, an old, locally owned store, recently went bankrupt. Even though Emeryville's total population (including the projected Bayfront residents) combined with that of the surrounding Oakland neighborhoods would be large enough to support a community center, the buying power and cultural mix is too varied to make this a good trade area.

Regional Center. Regional shopping centers are concentrations of stores offering the largest merchandising mix, including shopper goods. Shopper goods are major consumer items like appliances, furniture, and automobiles. Regional centers draw from large trade areas within 10-15 miles or a 25-minute drive. This type of center came into being after World War II when automobiles became prevalent in the general population. Regional shopping centers reached their peak both in the Bay Area and nationally during the 1970s, and by late that decade, mall retail space was expanding more quickly than the actual demand for shopper goods.³ This trend has

¹ Rubin A. Roca, Market Research for Shopping Centers, 1980.

² Urban Land Institute, Dollars & Cents of Shopping Centers 1981, 1981.

³ Thomas J. Black et al., Downtown Retail Development: Conditions For Success and Project Profiles, 1983.

continued in this region where four regional shopping centers have been built in the past five years,¹ with several of these still struggling to reach full occupancy.

In the East Bay, one regional shopping center and downtown Oakland serve a trade area including the affluent parts of Oakland, Berkeley, Albany, Piedmont, and Alameda. A recent retail market analysis completed for downtown Oakland indicates this area is currently underserved given the trade area's per capita income (\$30,000 to \$50,000) and total population. In the East Bay there is an average of 22.5 square feet of department store space per household in the \$30,000+ range, and 72.4 square feet per household in the \$50,000+ category. The contrasts to 33.0 square feet and 72.4 square feet, respectively, for the Marin/Southern Sonoma area. The market analysis concludes that the East Bay is the most underserved trade area in the region and that an additional 600,000-700,000 square feet of new department store space could be supported in downtown Oakland.² Thus, the market potential probably exists to support one regional shopping center in the East Bay. Whether this center locates in Emeryville, Oakland, Berkeley, or even Albany will depend to a great degree on developer interest and speed in implementing plans. Although Emeryville has some locational advantages over downtown Oakland in terms of regional highway access, Oakland has BART and an existing retail core that may make it a stronger location for additional development.

OFFICE SPACE

The Bay Area's office space market can be divided into two primary types of space. The first type are the highrise downtown grade "A" offices typically used by top executives or business services like large law firms; the second type are midrise suburban office buildings in more campus-like settings typically occupied by middle management office functions, data processing units, and smaller, more local-serving service professionals like real estate agents or accountants. Prior to 1970, the suburban office space market was virtually nonexistent in this region while San Francisco was considered the preeminent office location. During the 1970s, various factors, including high rents and low vacancy rates, in San Francisco, as well as increasing suburban population densities and improved transportation links, created conditions favorable to large suburban office construction. In 1979, for the first time, more office space was added outside San Francisco than in the city's traditional downtown core.³ The majority of this suburban office space was built along Interstate 680 in central Contra Costa County and to a lesser extent in eastern Alameda County. In the early 1980s, the high rents and low vacancy rates in San Francisco motivated developers to build highrise grade "A" space in downtown Oakland and in Contra Costa County locations such as Concord and Walnut Creek. Consequently, there was an office construction boom throughout the region aimed primarily at capturing the types of tenants who historically occupied San Francisco financial district offices. By the end of 1983, the office space supply was beginning

¹ Urban Land Institute, Development Review & Outlook, 1984-1985.

² Keyser Marston Associates, Downtown Oakland Retail Analysis, 1984.

³ Association of Bay Area Governments, Bay Area Office Growth, April 1981, p. 2.

to catch up with demand; currently, supply far exceeds demand, resulting in vacancy rates ranging from around 10% in downtown San Francisco to around 19.8% in Contra Costa County suburban areas. Table IV-3 shows the actual space available for the four counties comprising the region's major office market. Although these are 1983 data, they reflect the general trend towards office oversupply in the region which is expected to be exacerbated by continued high construction levels. By mid-1985, 1.3 million square feet of new space is expected to be on the market in San Francisco and 1.8 million square feet in Oakland, driving vacancy rates up several percentage points by 1986.¹

TABLE IV-3

1983 OFFICE SPACE INVENTORY: SAN FRANCISCO, SAN MATEO,
ALAMEDA, CONTRA COSTA COUNTIES

<u>County</u>	<u>Number Of Buildings</u>	<u>Total Built Square Footage</u>	<u>Vacant Square Footage</u>	<u>Vacancy Rate</u>
San Francisco	185	25,301,611	4,103,140	16.2%
San Mateo*	470	11,310,000	959,000	8.5%
Alameda	220	13,116,051	1,799,739	13.7%
Contra Costa	201	7,583,999	1,317,147	17.4%

Source: Coldwell Banker

*Third quarter 1984

Office space in Emeryville fits into several niches within the regional office market. The office towers located on the city's Peninsula are typical "Class A" office space with good freeway access and spectacular views. This space is likely to be attractive to tenants who would locate in downtown Oakland, or perhaps even San Francisco, and who are concerned with the quality and image of their offices. This "Class A" space of about 800,000 square feet, including the tower currently under construction, rents in the \$2.00 per square foot range. An additional 200,000 square feet of development has been approved for the Peninsula, but there are no firm plans when it will be built.

To the east of Interstate 80 in the Bayfront area is lower-density office space which differs somewhat from the space on the Peninsula. This space lacks spectacular

¹ Jack Miller, "Tenants get Bargains in Office Space Glut Here." San Francisco Examiner & Chronicle, November 25, 1984.

views of the Bay from lower floors, is lower-quality construction, and is generally perceived as less desirable. Therefore, rents are somewhat lower than those on the Peninsula and range from \$1.30 to \$1.70 per square foot. There are other smaller office spaces in the Bayfront as well as in the remaining portions of the city that are usually occupied by very small business or research facilities like Cetus. These spaces rent from \$0.50 to about \$1.00 per square foot.

To date, most of Emeryville's office space has attracted more conventional office tenants like professionals and business services. However, there has been an increasing interest in use of the older buildings by research and development users, particularly those in the biotechnology field. Many of these users are concerned with amenities around their buildings and would prefer to be in a campus-type office setting, but a few pioneering companies have been attracted to Emeryville because of its location and reasonable rents. In the future, as developers begin to renovate more of the old-style buildings, this type of tenant will probably generate considerable demand for space in Emeryville. This type of activity will probably displace a considerable amount of Emeryville's traditional manufacturing sector, resulting in a transformation of the economic base and an improved image.

Until recently, there was a very low vacancy rate (about 4%)¹ in Emeryville office buildings as space tended to be empty only briefly. Due to Emeryville's good location and attractive views, the city's office space will probably be fairly competitive with comparable space in other locations. People familiar with the city's market conditions estimate that 50,000 to 70,000 square feet can be absorbed per year. Even with the anticipated region wide office space glut, Emeryville can probably be expected to maintain this absorption rate throughout the remainder of this decade.

HOTEL

The Bay Area is a major center for tourism, as well as national and international trade. In addition, San Francisco has a large convention center and several smaller facilities for trade shows, conventions and large meetings. Oakland also has a relatively new convention center completed in 1982. These types of activities create a considerable demand for hotel rooms. As recently as 1982, there was a shortage of hotel rooms in San Francisco and this created tremendous demand in the East Bay. The market responded to this shortage with a building boom and now there is an oversupply.

Some experts speculate that the current hotel room glut in San Francisco will bring prices and vacancies low enough to attract people who might otherwise stay in East Bay hotels. However, a survey of hotels in the immediate vicinity of Emeryville indicates that, so far, the East Bay is doing quite well. As Table IV-4 shows, three out of four operating hotels contacted have an occupancy rate of at least 70%, compared with the national average occupancy rate of 66.6%². As with housing, location is important. The Holiday Inn and the Berkeley Marriott are adjacent to

¹ Coldwell Banker, East Bay Office Survey, Winter/Spring 1984.

² William Celis, "U.S. Lodging Industry Staggered by Room Glut and Building Boom," Wall Street Journal, November 26, 1984.

TABLE IV-4
COMPARABLE HOTEL PROJECTS FOR THE EMERYVILLE MARKET

<u>Project</u>	<u>Location</u>	<u>Number of Rooms</u>	<u>Daily Room Rates (\$)</u>		<u>Occupancy Rate (annual avg)</u>
			<u>single</u>	<u>double</u>	
Marriott	Berkeley Marina	250	88-102	100-114	90%
Holiday Inn	Emeryville	281	60-75	70-85	75-85%
Days Inn*	Emeryville	155	n/a	n/a	n/a
Claremont Resort	Berkeley	268	94-144	109-159	75-80%
Hyatt	Downtown Oakland	488	77-97	89-109	64%

Source: Sedway Cooke Associates

* under construction

Interstate 80 and so have good regional access. The Hyatt in downtown Oakland serves a smaller market due to its less accessible location and has an occupancy rate over 2% lower than the national average, and over 13% points below the East Bay average of 77%.

The hotel room oversupply in the Bay Area is indicative of a national trend of overbuilding, the origins of which lie in the market's response to the previous shortage, as well as in decisions by local governments to encourage hotel construction by being overly willing to finance it with tax-exempt bonds. Hotels are an attractive investment for the real estate syndications and partnerships responsible for much of the recent overproduction. Only the larger hotel chains have managed to remain profitable in the face of the national hotel room glut by carefully planning new projects and tailoring them to specific market segments. A particularly lucrative segment seems to be budget-type facilities. Days Inn reflects this trend, since this company typically serves the lower end of the hotel market.

It is difficult to judge future demand for hotel rooms in the East Bay. Current high occupancy rates, even with the glut in San Francisco, indicate that there is probably enough demand in the East Bay alone to support more hotel rooms. The only known existing plans for an additional hotel are part of an Urban Development Action grant proposal for downtown Berkeley and would include about 200 rooms. There are other proposals for hotel construction, including Santa Fe Railroad's for the Berkeley waterfront. However, none of these proposals are beyond the conceptual phase.

INDUSTRIAL

In the East Bay, most industrial space is concentrated in southern Alameda and central Contra Costa Counties. In 1983, Alameda County absorbed over 6.7 million square feet of industrial space.¹ About two-thirds of this space was in Hayward, Fremont, and Union City where there has been a proliferation of industrial construction aimed at attracting part of the high-technology market traditionally based in Silicon Valley. Contra Costa County absorbed about 1.5 million square feet of industrial space in 1983, mostly traditional manufacturing activities. In this same time period, Berkeley and Emeryville absorbed about 25,000 square feet and 200,000 square feet, respectively.²

Historically, Emeryville has been a center for traditional heavy manufacturing and warehousing activities. However, by the late 1970s, many older firms began leaving because of plant obsolescence, limited room for expansion, and high land costs.³ Yet even with considerable out-migration of manufacturing companies, both Emeryville and Berkeley have maintained relatively low vacancy rates. Many old buildings have been converted for multiple users and rented to small companies, ranging from crafts production to biological research. There is a very strong demand for these small "incubator" spaces throughout the Bay Area. Rents vary from \$0.60-0.90 per square foot in San Francisco to \$0.30-0.50 in Emeryville/Berkeley and about \$0.25-0.40 in southern Alameda County.

Future market projections for the East Bay indicate there will be an oversupply of industrial space in southern Alameda County, driving down rents and attracting firms from Silicon Valley. However, in the northern part of the County, including Emeryville, older industrial space will continue to be converted to alternative uses, including retail and office. For example, one developer has plans to convert an old warehousing facility into a biotechnology office building early next year. This trend should continue throughout the decade.

¹ Grubb & Ellis, *Forecast Eighty-Four: Alameda-Contra Costa Counties*, 1984.

² Ibid.

³ State of California, *Alameda County Business Migration Study*, 1978.

V. URBAN DESIGN

INTRODUCTION

Urban design is a process of designing an urban setting comprehensively, in contrast to individual buildings. By influencing new construction, preserving distinctive buildings, and integrating landscaping, urban design shapes and directs the physical setting and form of the city. While a main function of the General Plan is to promote the better utilization of the city's assets by designating future land uses, the function of urban design is to translate this land use pattern into a meaningful and well-organized three-dimensional image. In this way, the future city will not be a product of piecemeal decisions made around individual buildings; rather it will be a coordinated collection of buildings with their visual and functional interrelationships as well as their side effects fully considered.

The first part of this section describes Emeryville's form and appearance in terms of the larger regional setting. The second part concentrates on the city itself, examining its overall image, identity, structure, scale, and visual attractiveness. The third part describes the visual setting of the Peninsula, the Bayfront, and the area east of the railroad tracks.

REGIONAL SETTING

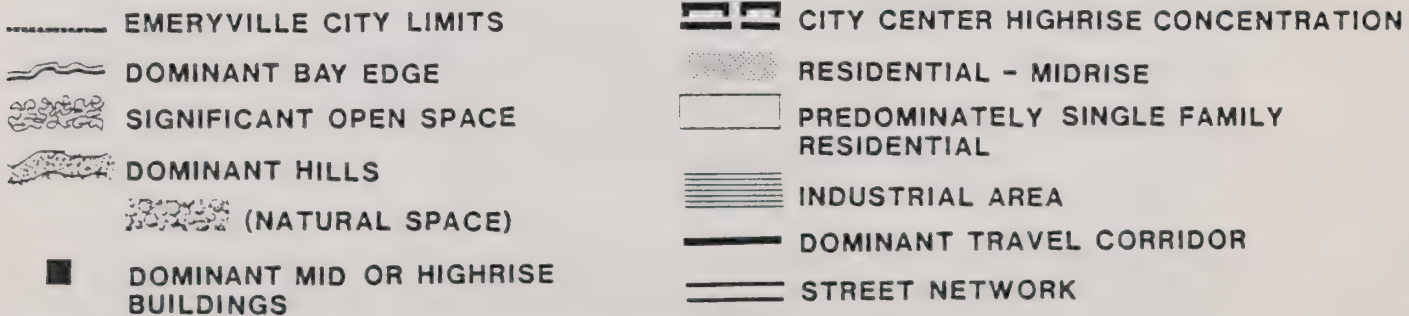
Emeryville is centrally located in the East Bay between Berkeley and Oakland. As shown in Figure V-1, the area is framed by two dominant natural elements, the hills to the east and the bay to the west. The majority of the area between these natural features is characterized by lowrise housing areas, accentuated occasionally by landmarks like the Claremont Hotel, Lawrence Hall, and the U.C. Berkeley Campanile. Consequently, prominent man-made urban elements of this setting such as downtown Oakland, the maritime facilities of the Port of Oakland, the Emeryville waterfront development, and downtown Berkeley, are easily recognizable and help define the region's image.

The city historically has been an integral and cohesive part of the East Bay physical setting. Between the waterfront and San Pablo Avenue, Emeryville's early development pattern in form and appearance blended with the lowrise industrial and housing areas that spread uniformly throughout the East Bay. A gridiron street system with major streets running from the hills to the bay (University, Ashby, etc.) and north-south connectors (San Pablo, Telegraph, etc.) provided an organization and orientation to the development pattern. This physical setting was dramatically changed by the construction of the freeway system, which physically divided virtually all of the East Bay urban area from its waterfront. The extension of the East Bay waterfront lands into the bay through landfilling further reduced the historic cohesiveness of the region, because the new lands had no organic, functional tie with the existing physical setting.

The relatively recent development of Emeryville's Peninsula has introduced a new building form to the physical setting of the East Bay's waterfront, which has had two effects. First, the building forms represented a significant break from the predominantly lowrise development pattern of the East Bay. As freestanding towers along the shoreline, they are obvious landmarks from the major travel routes and help



Figure V-1
REGIONAL PHYSICAL SETTING



EMERYVILLE GENERAL PLAN

SEDWAY COOKE ASSOCIATES

Urban and Environmental Planners and Designers

provide some orientation, but they are also out of scale and character with the surrounding areas. Second, the scale of the new structures is more representative of a major center than a community like Emeryville. The perception one has upon seeing these large-scale projects is that they define a large urban setting. Yet, as one enters the area, it becomes clear that the tall buildings are isolated and really unrelated to any of the adjacent uses and activities. Thus, the new development creates an inappropriate image for Emeryville--or at least one that is now premature. In summary, the development decisions that have been made in Emeryville have not only affected the city but they have begun to reshape the visual setting of the entire East Bay region.

CITY SETTING

Emeryville is a rather small city compared to Berkeley or Oakland. Traditionally, it has been an industrial city dominated by medium- and large-scale industrial uses on a gridiron pattern of city streets. Although Emeryville's borders are not clearly defined, they roughly follow Ashby on the north, San Pablo on the east, Interstate 580 on the south, and the bay and Interstate 80 on the west.

Physical Form and Structure. Historically, Emeryville developed mainly along the railroad tracks as private industrial developers sought to accommodate service and process industries near the major transportation routes. This kind of development had extensive land requirements and typically included manufacturing activities with adverse environmental effects. The presence of the railroad lines and the later construction of the freeway introduced physical barriers that divided the city into three major subareas: the Peninsula, the Bayfront, and "East Emeryville." Each of these subareas exhibits different land uses and physical forms that are not related to one another, either visually or functionally. East Emeryville has a rectangular street pattern and lowrise development; the Bayfront lacks an organized street pattern and is dominated by large and bulky industrial buildings and open storage spaces; and the Peninsula contains new land uses (a marina, and apartment and office buildings) in a high-intensity, mid- to highrise building form.

Today, Emeryville is still predominantly an industrial city, a city of large industrial warehouses and extensive storage areas. At the same time, Emeryville is a city of striking contrasts with tall office and residential buildings juxtaposed against low industrial facilities. An essential role for the urban design component of the General Plan will be to provide guidelines to integrate the different subareas better, both visually and functionally, and to create an image of a highly attractive, vital, and liveable community.

Gateways and Orientation. There are several key points, or gateways, from which to enter the city by car: Powell Street from the west, Ashby Street from the north, San Pablo from the east, and the MacArthur-San Pablo-Adeline intersection from the south. Because each of the entry points is poorly defined or confusing to a driver, two problems arise. First, people are unaware that they have entered Emeryville and second, they gain no sense of direction or orientation. Entering Powell Street from Interstate 80, there is no gradual approach or gateway to signal that one has arrived in Emeryville. Rather, one approaches the city along an artificially imposed boundary (the freeway) which physically separates the city from its waterfront part. Entering from Ashby, one has to maneuver between irregular city blocks to reach Hollis, the only north-south connector street into the city. From the east, the limits

between Emeryville, Oakland, and Berkeley are not defined and motorists do not know where the city begins. Entering the city from the south is probably the most confusing because the MacArthur/Adeline/San Pablo intersection has about nine streets approaching it, making the area visually chaotic.

Within the city, there are only two continuous through streets, Powell and Hollis. Consequently, it is very difficult to gain a sense of orientation and to get from one part of the city to another. Orientation is further reduced in the Bayfront and East Emeryville where the city street pattern is criss-crossed by railroad lines, and industrial uses have physically transformed and modified the more regular city block pattern. Motorists gain a sense of orientation only by using local landmarks and clues like highly visible water towers or particular buildings like the Old City Hall, Westinghouse, and Pacific Park Plaza.

Visual Attractiveness. Whether the city is visually attractive depends on the public perception of its physical form and scale. The most prominent feature of Emeryville's physical form is its abrupt departure from traditional building heights of 2-4 stories, spread evenly throughout the city. The new development on the Peninsula encompasses housing and office structures 4-20 stories high. This scale of development has recently been reinforced by the 30-story Pacific Park Plaza in the Bayfront area. These new structures are at a scale significantly greater than surrounding areas and consequently are visually prominent and isolated. Amidst the highly contrasting physical scales in the city's subareas, there is no sense of community identity. A city center does not exist, and the centrally located Bayfront area is mostly underutilized open space. The lack of citywide identity, linkages among subareas, visual compatibility between adjacent land uses and buildings, and open space suggests major areas of improvement for the city to achieve a desirable form, scale and, hence, level of visual attractiveness.

CITY SUBAREAS

Peninsula. This most recently developed area of Emeryville stands completely isolated from the city on the west side of the freeway. By itself, the Peninsula is not large in size but has a very pronounced narrow and elongated form. Jutting out into the water, this subarea commands impressive panoramic views in all directions. At the same time, surrounded by water, its mid- and highrise buildings are highly visible from the freeway. Its only entrance is from the intersection of Powell Street and the Frontage Road. Its main land uses are functionally separated into three different groups, each with different physical scales and images. At its eastern edge, there are tall office buildings and the Holiday Inn surrounded by an extensive open parking lot. In the middle of the Peninsula is the highly structured, four-story Watergate complex concentrated around indoor open spaces. At the western end of the Peninsula is a mid-size marina with berths, functional buildings, and a city park. All of these land uses are aligned linearly along a single street on the southern part of the Peninsula.

Bayfront. This subarea is not visible from the other two city subareas because it is physically divided from them by the freeway and the Southern Pacific rail lines. Its physical elements are defined by a mixture of individual uses and ill-defined open spaces. This area with large steel mills, industrial storage yards, open truck parking, a few scattered old and new lowrise office buildings, and a single massive residential tower does not present a coherent visual image. Moreover, there is no cohesive

street pattern to link visually or functionally these individual uses. The most striking impression that this area conveys is one of extensive visual and physical blight.

In spite of the present disuse and visual disorder, this area has definite assets and potential. First of all, its central location within the city should give it a completely new role in the city structure. Second, the large amount of open and underutilized space create the flexibility to encourage well-designed, coordinated development. Third, Temescal Creek, presently a channelized drainageway, is a resource that can be used to reintroduce nature and landscaping into the city.

East Emeryville. East Emeryville extends east of the railroad tracks and encompasses over two-thirds of the city area. It consists of four subareas defined earlier: Central Emeryville, the North End, the Triangle, and the Southern Border. Central Emeryville is predominantly industrial in use, organized on a gridiron street system. The North End consists of a residential strip ten blocks long and two blocks wide between Vallejo and Doyle Streets, adjacent to large, old industrial lots. The Triangle, encompassing the area between San Pablo and Adeline, contains a housing area in relatively good condition and a commercial strip along the major arterials. The Southern Border is a visually disorganized, poorly defined space, spreading on both sides of Yerba Buena Street between San Pablo and Hollis. This area consists of residual buildings and railroad tracks, and serves as a large truck parking space.

The main spatial and physical problems in East Emeryville are its isolation from the other city subareas; the ill-defined, confusing, and poorly maintained street system; the poor physical condition of many structures, creating a feeling of urban blight; the lack of open space; and the prevalence of land use conflicts, as described in Chapter III. In spite of the apparent chaos created by overlapping and conflicting land uses, this largest area of Emeryville has tremendous design and development potential. First of all, the gridiron street pattern provides decent orientation and outstanding views of the hills to the east and of the bayfront to the west. Second, many of the buildings, including old brick warehouses along Horton and Park of historic and architectural merit, could be effectively reused to create a distinctive image and appearance. Outstanding buildings that need to be specially recognized include Westinghouse, ITT Grinnell and Old City Hall. Third, the housing areas, especially in the Triangle area, are already in good condition and could be easily physically upgraded. As described in Chapter II, improving the physical appearance of the housing stock has the added benefits of enhancing neighborhood quality, civic pride, and visual attractiveness. San Pablo and Adeline are major travel corridors where economic incentives, as well as design guidelines, will be needed to stimulate their revitalization. Finally, the large space in the Southern Border is a major asset because it could accommodate a significant intensification in land uses. Furthermore, its proximity to the revitalizing Park Avenue development and accessibility from all parts of the city, as well as its regional accessibility from the MacArthur interchange, suggest this will be a focal point of future activity.

CONCLUSIONS

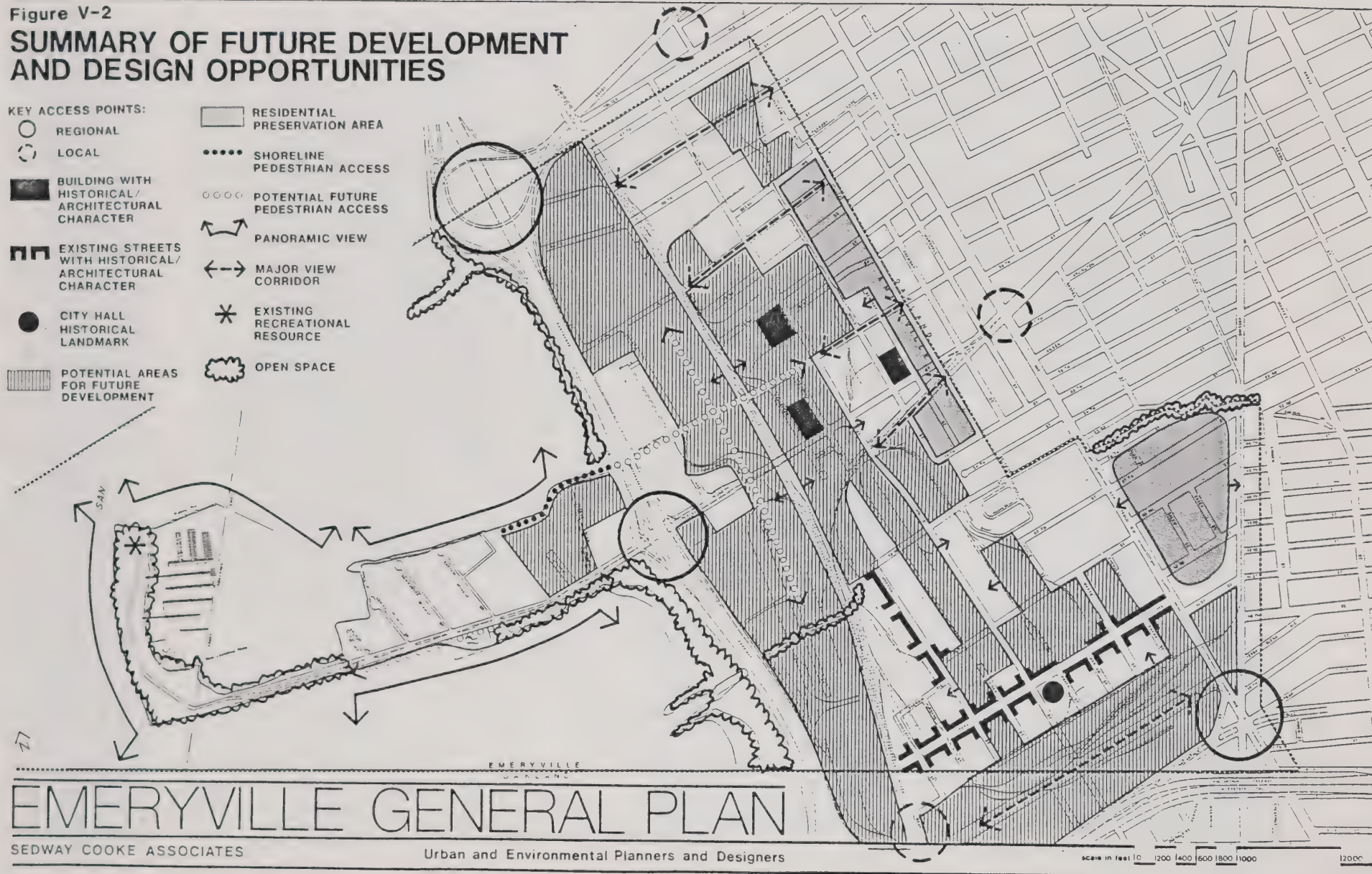
The development and design opportunities for each of the city's subareas are illustrated in Figure V-2 and summarized below. Presently, Emeryville is undergoing rapid change, particularly in the Peninsula and Bayfront subareas. This physical change at the same time also represents a dramatic transformation of the city's image and identity. Older manufacturing, industrial uses are leaving as well as land extensive

Figure V-2

SUMMARY OF FUTURE DEVELOPMENT AND DESIGN OPPORTUNITIES

KEY ACCESS POINTS:

- REGIONAL
- ⊙ LOCAL
-  BUILDING WITH HISTORICAL / ARCHITECTURAL CHARACTER
-  EXISTING STREETS WITH HISTORICAL / ARCHITECTURAL CHARACTER
- CITY HALL HISTORICAL LANDMARK
-  POTENTIAL AREAS FOR FUTURE DEVELOPMENT
-  RESIDENTIAL PRESERVATION AREA
- SHORELINE PEDESTRIAN ACCESS
- POTENTIAL FUTURE PEDESTRIAN ACCESS
-  PANORAMIC VIEW
-  MAJOR VIEW CORRIDOR
- * EXISTING RECREATIONAL RESOURCE
-  OPEN SPACE



trucking operations. What these uses leave behind are large physical structures and open space. Much of this underutilized space is concentrated between Interstate 80 and the Southern Pacific railroad right-of-way. Using this area as the focus for its future economic growth, Emeryville can offer economic advantages and attractive locations for future uses that will be competitive with other communities in the East Bay. In order to achieve this, it has to improve its regional traffic access and develop a new physical identity that is visually exciting and commensurate with the regional significance.

Currently, Emeryville has no clear identity and is not visually attractive. However, there are existing resources and potential that can be capitalized upon. First, all three city subareas must be connected in a meaningful way by creating new points of community life and social interaction. Second, a new city center, encompassing a concentration of major office, business, retail and public uses, should be centrally located and help enhance the city's physical appearance. Third, new buildings can improve the existing city skyline by carefully balancing the scale of new buildings on the Peninsula and Bayfront with the existing lowrises of East Emeryville. In order to functionally and visually integrate the city, these new structures must be appropriately designed in identifiable, comprehensible phases. Finally, all individual buildings and city blocks of historic or architectural merit need to be carefully integrated with this new development. Old brick warehouses along Horton and Park and existing landmarks like the Westinghouse building, the ITT Grinnell building and Old City Hall impart a distinctive character to the City. These buildings are assets that should become new focal points in the design of East Emeryville.

Aside from improving the visual image of the city, new development can also upgrade access to the city and the city's internal street system. The location and design of particular structures can provide travelers with an orientation and understanding of the city's organization. The use of all travel modes--automobile, public transit, bicycle, and pedestrian--are needed to link the subareas of the city. The waterfront, in particular, should be accessible to anyone, whether or not they are driving.

Public open space is a significant factor in the quality of urban life. Yet Emeryville is definitely lacking in this respect. Temescal Creek in the Bayfront is a major asset, as are the green areas in the Triangle area. Throughout the city, an open space system should be introduced in the form of small parks, trees along the major traffic corridors, etc. This would not only improve the city's visual appearance, but could also serve to unify or differentiate various subareas of Emeryville.

Housing areas should be upgraded and protected from other conflicting uses in order to provide identifiable and safe neighborhoods for residents. Improvements need to include repairing streets and sidewalks, cleaning up littered areas, planting trees, and installing street lights, as well as rehabilitating and maintaining the housing units. The existing lowrise single-family pattern should be preserved in the Triangle and North End subareas, while new higher-density housing units should be concentrated in the Bayfront, the Peninsula, and Central Emeryville.

In short, subareas within the city need to be enhanced and their distinctive features accentuated. At the same time, the planning process must ensure that these subareas develop in a coordinated fashion so that they visually and functionally work well together. This attention to subarea issues, to linkages among the subareas, and to the overall citywide form will be the focus of the urban design element of the city's General Plan.

VI. TRANSPORTATION

INTRODUCTION

The importance of developing a circulation system that supports and serves the proposed land uses cannot be emphasized enough. The inability of people and goods to move about efficiently will severely undermine the city's ability to achieve its economic and development potential. Moreover, inadequate regional access will mean that the city will fail to capitalize upon one of its greatest assets: its central location in the region. The following description of Emeryville's circulation system is intended to identify the various modes of travel available to people and goods moving to, from and around the city. It also provides the background documentation for the city's transportation element of the General Plan, required by Government Code Section 65302(b). Existing and future transportation features of the City of Emeryville are described in the Environmental Impact Report on the Amended Redevelopment Plan, and the following description is derived largely from that document.¹

STREET SYSTEM

Highways. The City of Emeryville is located near a hub in the Bay Area transportation system, as shown earlier in Figure I-2, and is well-served by several major travel corridors. Interstate 80, serving all of the northern portion of the East Bay, passes north-south through the city, where it is also designated as State Route 17. A second interstate freeway, Interstate 580, runs adjacent to the city's southern boundary. These highways provide Emeryville with direct freeway connection to San Francisco, the southern portion of the East Bay, Santa Clara County, the Livermore Valley, and all of Central Contra Costa County. In addition, State Road 13 (Ashby Avenue) on the north edge of the city carries about 35,000 vehicle trips daily toward the Berkeley Hills and the Caldecott Tunnel. State Route 123 (San Pablo Avenue), in the eastern part of the city, carries about 20,000 vehicle trips daily.

Interstate 80 is a busy urban freeway that carries traffic volumes of more than 200,000 vehicles daily through Emeryville. The freeway operates well most of the day, however, it experiences peak hour congestion, particularly in the evening because of a bottleneck at the Ashby interchange caused by a lane reduction from five to four lanes for northbound traffic. Peak period speeds on the freeway vary from a low of about 20 mph during the afternoon and evening congested hours to about 50 mph in the morning peak period. During the remainder of the day, the freeway operates at typical urban freeway speeds.

Interchanges. Emeryville is served by three freeway interchanges: Ashby Avenue, Powell Street, and San Pablo/MacArthur. The first two of these are on Interstate 80 and the third is on Interstate 580. Of the three interchanges, only the Powell Street interchange provides access for all directions to and from its local service area. The

¹ City of Emeryville, Final Environmental Impact Report on the Amended Redevelopment Plan, August 1983, pp. 48-61, 66, 67.

Ashby Avenue interchange serves Emeryville only on the northbound off and northbound on movements via a connection to Bay Street. The San Pablo/MacArthur interchange is convenient only for westbound traffic onto the freeway and eastbound traffic off. Freeway access to and from the east can be made from the San Pablo/MacArthur area via 35th and 36th Streets. Because of the limited usefulness of two of the three freeway interchanges, most traffic to and from Emeryville is concentrated at the one full interchange at Powell Street.

During peak hours, the freeway ramps at Powell Street are extremely congested. Evening peak hours have the worst congestion, but considerable congestion also occurs in the morning peaks. The evening peak is the period when both the local streets and the freeway experience their highest volumes. The partial movements available at the Ashby and San Pablo/MacArthur interchanges do not attract sufficient traffic volume to experience significant congestion at any time throughout the day.

Local Streets. The local street system in Emeryville is constrained by a limited number of through streets and by many short street sections and cul-de-sac streets. It is not a complete urban-type network. There are two areas where substantial congestion now occurs at peak hours. These are on Powell Street at its intersection with the Interstate 80 ramps and on San Pablo Avenue at its intersection with MacArthur Boulevard and Adeline Street. The most severe local street congestion is on Powell Street, where it actually intersects three different traffic access points: the northbound ramps, the southbound ramps, and the westside frontage road. The congestion is severe enough to cause the first local street intersection east of the freeway, Powell at Christie, to operate below its theoretical capacity. Right turn traffic from Christie onto Powell is halted by the vehicles stopped at the signal controlling Powell and the freeway ramps, causing interference in the operation of Powell and Christie. The remainder of the local system functions well throughout the day.

Another type of access problem confronts Emeryville residents living on 54th Street west of Boyer Street. The only access to this residential cul-de-sac is through Oakland; no Emeryville streets connect to 54th Street. Although a minor item, it underscores other significant political and social concerns, such as how well the area identifies with the city.

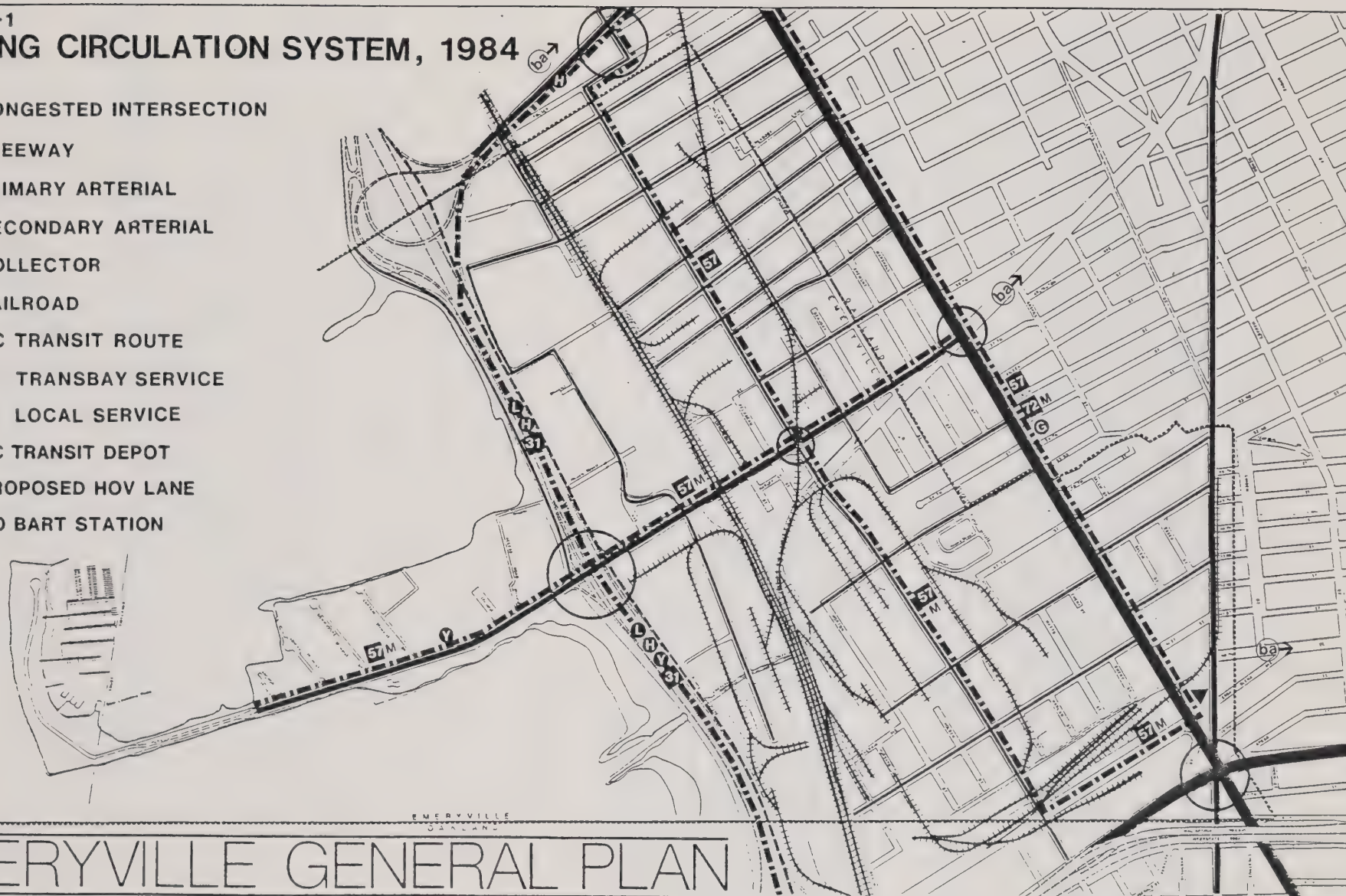
PUBLIC TRANSIT

Emeryville is served by several AC Transit bus routes. Commute service to San Francisco is provided by the F and G lines in the southeasterly corner of the city, the Y line on the Peninsula, and the FX line on Powell in the morning commute period only. Local service is provided by the 57M serving the Peninsula, the Bayfront, central Emeryville and the Southern Border areas; the 57 which serves the North End and the Triangle; and the 72 which provides a high-frequency service along San Pablo Avenue. The bus routes are shown on Figure VI-1.

Figure VI-1

EXISTING CIRCULATION SYSTEM, 1984

- CONGESTED INTERSECTION
- FREEWAY
- ▬ PRIMARY ARTERIAL
- ▬ SECONDARY ARTERIAL
- ▬ COLLECTOR
- ▬ RAILROAD
- - - AC TRANSIT ROUTE
- Ⓢ TRANSBAY SERVICE
- 57 LOCAL SERVICE
- ▼ AC TRANSIT DEPOT
- - - PROPOSED HOV LANE
- ba→ TO BART STATION



EMERYVILLE GENERAL PLAN

SEDWAY COOKE ASSOCIATES

Urban and Environmental Planners and Designers

Scale in feet 10 200 400 600 800 1000 2000

RAIL ACCESS

Emeryville is located on the Southern Pacific Transportation Company railroad mainline. This line and a number of spurs are actively used for freight operations by businesses in and around the city. The future use of the rail lines will greatly influence the development pattern and circulation system in Emeryville. Although there is no passenger rail station in the city, Amtrak operates three routes that pass through the city, using the Southern Pacific lines: the San Joaquin (two runs), the Pacific Coast Starlight (one run), and the Zephyr (one run). The trains pass through the city eight times a day, at varying times.

FUTURE TRANSPORTATION CONDITIONS

Identified in Table VI-1 are several large transportation projects that will be completed within the next 10-20 years. Projects 1, 2 and 3 are proposed in the CalTrans Operational Improvements to I-80 and I-180 Project. Based on current AC Transit policy, service to and from Emeryville via AC Transit "L" routes is assumed to begin when adequate bus stop facilities are available and when demand warrants service. Projects 4 and 5 are local projects. The improved access to the San Pablo/MacArthur interchange will be primarily Emeryville's responsibility but will require the cooperation of the City of Oakland. Another proposed transportation improvement is a bicycle/pedestrian pathway which would span from the north end of the proposed Eastbay Shoreline Park to the south end located near the Oakland Bay toll plaza. (For further information on the pathway refer to the recreational facilities section of Chapter VII.)

TABLE VI-1
FUTURE TRANSPORTATION IMPROVEMENTS

1. Interstate 80 HOV* lane and interchange improvements at Powell Street and Ashby Avenue.
2. Powell Street widening from Christie to Interstate 80 with left turn from Powell to Christie accomplished by grade separation.
3. Bus stops on Powell Street and at Ashby Avenue freeway ramps and increased frequency of service to San Francisco via AC Transit "L" routes.
4. Bay Street extended from Shellmound to Ashby interchange.
5. Local street extensions, capacity improvements and information programs to increase public awareness of alternate routes such as use of San Pablo/MacArthur interchange.
6. Bicycle/pedestrian Eastbay Shoreline Park pathway.

* High-occupancy vehicle (3 or more persons per vehicle).

At maximum build-out of likely redevelopment, the city could about double in both population and employment. The additional traffic can be expected to increase traffic congestion on freeway ramps and connecting local streets. The CalTrans Interstate 80 HOV project offers some opportunities to overcome some of the potential congestion on a regional level. The HOV project proposes special, separated lanes during peak periods that can be accessed at limited points by vehicles with three or more persons. Because the lanes are designed to bypass major segments of congestion, they would encourage carpooling and transit ridership. At the same time, the CalTrans proposal includes significant changes to the Powell and Ashby interchanges. The modifications will alter local movements in Emeryville and affect how people access the freeway. If they limit or constrain movement in and out of the city, as they appear to from initial reviews, the intensity of development in the city may need to be moderated so that the traffic generated by the development does not overload the street system. Consequently, it is essential that the CalTrans-proposed improvements be examined closely to determine whether they can be modified to enhance Emeryville's street system.

On the local level, the General Plan, Bayfront Specific Plan, and redevelopment processes will recommend street improvements to increase traffic capacity and the efficiency of traffic controls. As the underutilized parcels in Emeryville are developed more intensely, improvements to transit service need to be considered as a more viable alternative to driving in Emeryville. Finally, to connect Emeryville's various subareas and to improve its visual quality, a citywide pedestrian/bicyclist network needs to be considered.

VII. PUBLIC FACILITIES AND SERVICES

INTRODUCTION

The efficient and timely provision of public services and utilities is essential for the physical development and well-being of a community. Services such as fire protection, law enforcement, and parks contribute to an area's "quality of life" and sense of civic pride. Other facilities such as sewers, water supply systems, and gas pipelines can inhibit development if not provided. Because of the importance of these services, the State Government Code includes several references to ensure their consideration in the preparation of a general plan:

- Section 65302(a) requires preparation of a land use element that must address the proposed general distribution and general location and extent of the uses of land for . . . recreation . . . education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land.
- Section 65302(b) requires preparation of a circulation element that should address the general location and extent of existing and proposed . . . local public utilities and facilities.
- Section 65302(d) requires preparation of a conservation element that may address flood control and prevention, and control and correction of the erosion of soils, beaches, and shores.
- Section 65302(e) requires preparation of an open space element that must plan for, among other things, outdoor recreation.
- Section 65302(g) requires preparation of a safety element that must address protection from fires.

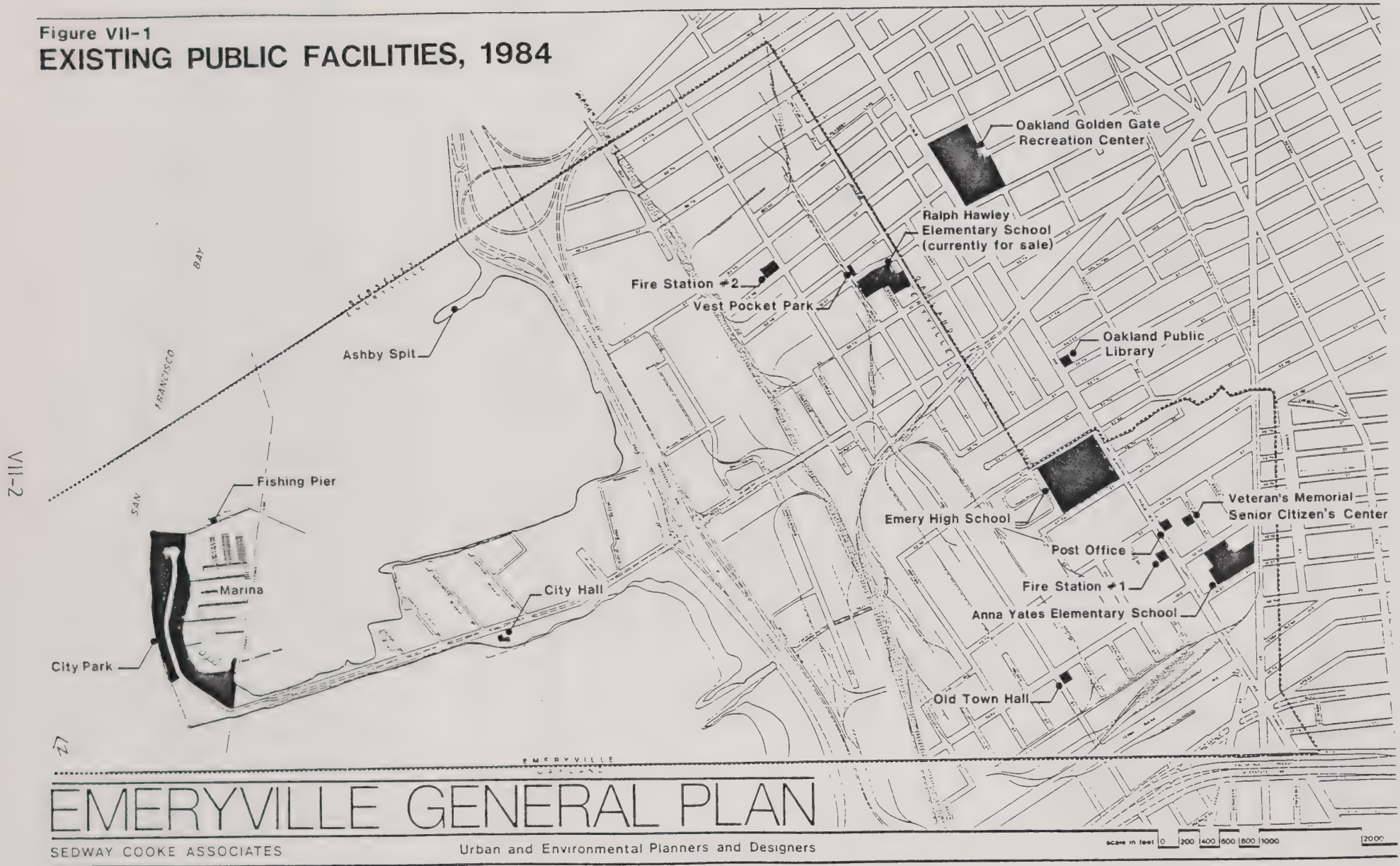
This section describes the various services available or lacking in Emeryville and suggests how their future provision will affect development in the city.

PUBLIC FACILITIES

The city's public facilities are illustrated on Figure VII-1.

City Government Facilities. The city's governmental offices are currently located in two separate locations. The Old Town Hall is located in the midst of a light manufacturing district at 1333 Park Boulevard and houses the Redevelopment Agency, the Public Works Department, the Housing Rehabilitation Department, and the Neighborhood Conservation Services Department. The new City Hall (at 2449 Powell Street) is on the Peninsula, separated from much of the city except for the Watergate complex. This facility houses the City Council chambers, the Mayor's office, the administrative offices (e.g., the City Manager, City Clerk, City Attorney, Finance Director, etc.), and the police department. The city does not have a corporation yard or operate any public parking facilities.

Figure VII-1
EXISTING PUBLIC FACILITIES, 1984



Schools. The city is served by the Emery Unified School District which operates two schools. All students of grades K-6 attend Anna Yates Elementary School at 41st and Adeline Streets. Current enrollment is 201 students. The roughly two-acre site has a maximum student capacity of approximately 275. High school students (grades 7-12) attend Emery High School at 1100 47th Street. Current enrollment is estimated at 249 students and maximum capacity is about 400. The teacher/student ratios at each school are at or better than the average state levels. The School District also owns another facility, the Ralph Hawley School, in the North End subarea at 1275 61st Street. The District is currently trying to sell the facility, as part of its program to pay back state loans.

This District has undergone a number of recent changes triggered by insufficient funds in past years. Formerly one of the top-financed districts in the state, the District has seen its teaching staff fall from 21 to 14 to its present level of eight. Concurrently, a number of classes and programs were reduced, and enrollment has been dropping. The District is now on a strict fiscal management program and is making major efforts to reattract students. The school curriculum is being revamped and includes a variety of new programs and classes.

Given the District finances and the city's student population, there are no plans to expand the existing school facilities. The possibility of such expansion would need to be considered if future development in Emeryville were to accommodate family households. Planning standards for school location recommend that elementary schools be within a maximum walking distance of one-half mile from the neighborhood. Assuming future schools would be similar in enrollment to existing schools (about 250 students) and the predominant housing type for future residential development would be multiple units, an additional elementary school would be needed to accommodate 1,665-2,500 new multifamily households.¹ These schools typically occupy 7-8 acres; however, in highly urbanized communities like Emeryville, site requirements are considerably smaller and must often be tailored to available space. These standards suggest certain locational and space criteria that should be recognized in allocations of future land uses.

Recreational Facilities. The city operates two recreational facilities. The playground on Doyle Street between 61st and 62nd Streets is only 0.15 acres and serves a very localized area. It includes playground equipment but no open play area. The other facility is located along the tip of the Peninsula at the western end of the city. It combines an open space area with the city's Marina which offers boat docks, fishing piers, and dining areas. The Marina serves not only residents of Emeryville but also persons from the greater urban area.

The provision of additional city recreational facilities is hampered by a limited number of sites and by the staffing and financial resources needed to maintain them. Funds to operate and maintain the Doyle Street playground derive from the city's general funds. Funds to maintain the Marina derive from user fees (fees charged to berth boats and for sport fishing) and sales tax revenues from the restaurants. The revenues generated by activities on the Marina are sufficient for routine upkeep but would not cover major expenses such as occasional dredging

¹ Assumes multifamily units generate 0.15-0.2 students in grades K-6 per household. Based on generation rates in Sacramento and San Jose.

(\$250,000), repair of the fishing pier (\$150,000), and erosion control of the shore (\$540,000 for that portion from the Oceanview Restaurant to the fishing pier).

Additional recreational services are available at the schools and at the Emeryville Senior Citizen Center in the Veterans' Memorial Building at 4321 Salem Street. Emery High School provides a variety of facilities including tennis courts, basketball courts, a bowling alley, and a swimming pool. The paved play area at Anna Yates Elementary School in the Triangle subarea can also be used for after-school activities. The Senior Citizen Center, aside from offering various social services, schedules dance, arts and crafts, physical fitness, and educational programs for the elderly.

A very rough estimate of a desirable amount of park and recreation space can be determined using standards developed by the National Recreation and Park Association. Emeryville with a population of 4,000 is equivalent to a good-sized neighborhood and would need a neighborhood park of 4-8 acres. It should be centrally located—within a 1/4-1/2 mile of all residents—and provide open space for intense recreational activities. However, Emeryville's population is not evenly distributed as would a neighborhood's. Over half the population is located in the Watergate complex and the Pacific Park Plaza condominiums, both of which offer recreational facilities to residents. The balance of the population is concentrated along a band in the North End and in the Triangle, subareas which are separated by a heavily trafficked street. It would be difficult to provide a neighborhood park that would be equally accessible to all population concentrations.

It must be also cautioned that the standards are based on nationwide studies and do not account for local circumstances that affect demand. For example, Emeryville's small size, mature population, and proximity to many other community and regional facilities suggest that nationwide standards overestimate the city's needs. Although the vest-pocket park on Doyle Street falls far short of providing the desirable amount of recreational acreage, the inclusion of the play areas at the two schools brings the city into the range of the national standards.

The desire for more and better facilities, however, was clearly expressed in a questionnaire distributed at the initial community meeting. The results of that questionnaire indicate that the shortage of outdoor and indoor recreational opportunities are among the mostly frequently perceived problems in Central Emeryville, the North End, and the Triangle.¹ Future development in Emeryville must recognize the existing shortage of recreational opportunities and plan for the additional recreational demand such development generates.

Cultural and Social Facilities. The city's Senior Citizen Center in the Veterans' Memorial Building offers a variety of programs for anyone over 60 years old. Although it primarily serves Emeryville residents, the program is open to all senior citizens. Specific services offered by the center include physical fitness and health classes, Medicare counseling, health examinations, hot meals, legal services, and social activities. The center also distributes taxi vouchers at a discount to help meet the transportation needs of the area's elderly. The primary funding source is the

¹ See Sedway Cooke Associates, Citywide Goals and Objectives, January 1985, for a summary of the responses to the questionnaire.

Older Americans Act (especially Titles 3 and 5). Other funding sources include federal revenue sharing, city general fund appropriations, and private donations.

The city's Child Care Program is funded by the State Department of Education and the city. It currently provides day care for children under five years old at the Ralph Hawley School site; however, given the uncertainty of the site's future, the program is in need of a permanent location. Because of this uncertainty, the program has not accepted new children, in spite of a waiting list of approximately 150. Fees for child care are based on the parents' income in accordance with a sliding scale established by the state.

The city does not have a public library or community center, although meeting areas are available at the high school and in a few of the newer residential complexes.

PUBLIC SERVICES

Fire Protection. The Emeryville Fire Department operates two fire stations. One is at 6303 Hollis Street, between 63rd and 64th Streets; the other is at 4331 San Pablo Avenue, between Park Boulevard and 45th Street. The total staff of 28 corresponds to a resident-to-firefighter ratio of 123:1, which is nearly ten times better than the national ratio of 1000:1. The relatively high level of staffing reflects the firefighting needs for extensive industrial and commercial developments.

Each fire station is staffed with a minimally acceptable three-man engine crew. In the past, five to seven people for an engine crew was typical in Emeryville, but a four-man crew would be adequate for most firefighting, evacuation and truck operation needs. The city participates in the Alameda County Mutual Aid Program, allowing the city to draw upon the firefighting resources of other nearby jurisdictions. If firefighting needs exceed available equipment or manpower (as in the case of firefighting in a non-sprinklered highrise), the dispatcher would activate the Mutual Aid Program by contacting first Oakland, then Berkeley for assistance. Additional aid, if necessary, would be obtained by Berkeley (as the county north zone coordinator) or by the countywide coordinator.

The time required to respond to calls is generally kept within a three-minute limit which is accepted as an adequate standard. However, access to the Bayfront area and the west side of Interstate 80 is constrained by traffic congestion on Powell Street, especially during the afternoon when response times have reached a high of seven minutes.¹ Although there are other routes besides Powell Street across the railroad tracks, these crossings at 64th and 65th Streets are unreliable because trains block the crossings at unscheduled intervals. Afternoon commute hour traffic can also present a problem for a fire truck attempting to enter or cross San Pablo Avenue from Fire Station #1. In addition, the median strip prevents immediate access in both directions.

Further constraints to service are found in the limitations of the department's equipment. The one ladder truck, kept at Fire Station #2 (Hollis Street), can reach only 106 feet. This is not a problem for lowrise or sprinklered highrise buildings (the city

¹ Ray Vittori, Fire Chief, Emeryville Fire Department, November 26, 1984.

has adopted Uniform Fire Code regulations for sprinklered buildings); however, a few structures--the Watergate complex, the 14-story Holiday Inn, and the 12-story office tower at 1900 Powell Street--were built before the sprinkler ordinance was implemented. Aside from equipment limitations, staffing in the Emeryville Fire Department is inadequate to evacuate a highrise building while fighting a fire.

The Fire Department has indicated the required water supply or fire flow needed to extinguish a fire is available. New development could be served sufficiently with proper connections to existing mains and location of fire hydrants. The only existing problems are an 1800-foot stretch along Shellmound Street which has no hydrants, and a four-inch main on 65th between Vallejo and Hollis Streets, which is currently scheduled for upgrading to an eight-inch main.

Currently, two suggestions have been made to improve response times to the west side of Interstate 80. The first is a light locking system, now being installed on Powell Street from Hollis through the Interstate 80 intersection. This will allow the fire truck company to override all signals along Powell Street and switch them to green, effectively eliminating traffic in the critical direction. This system, which should be complete by April 1985, will represent only a temporary solution, and although it will reduce response times somewhat, this solution will not lower times to the three-minute ideal.

The second suggestion to improve service would be to consider a station on the west side of the freeway to serve both the Peninsula and the Bayfront. Under this proposal, the station would be financed in part by private developers, although the city would have to acquire land on which to build the station. If this happens, the remaining stations would need to be relocated, as present staff cannot maintain three stations.

Police Protection. The Emeryville Police Department is currently staffed with 23 sworn and seven civilian officers. This level of staffing results in a resident-to-officer ratio of 123:1, compared to the national ratio of 1000:1. Because the city is very small in area, the Police Department does not patrol by beats, and response times are 2-3 minutes for top-priority calls. Like the Fire Department, the Police Department participates in the Alameda County Mutual Aid Program. A Peace Officer Standards and Training (POST) study is currently underway to assess the actual performance and needs of the department.

Crime is generally considered a social problem, caused by lack of employment opportunities, discrimination and unhealthy or unstable home environments. While the city cannot directly correct these problems, it can adopt policies which discourage their perpetuation. In addition, it can foster a sense of security through physical structure and community designs which discourage the incidence of crime and encourage greater citizen participation in the crime prevention process.

Response to crime involves coordination of the police department with other city emergency response teams. In some cases, neighboring jurisdictions may become involved through the Alameda County Mutual Aid Program. In fewer cases, crime prevention may require the involvement of state and federal agencies. Response procedures must be well documented and widely understood, and communication between agencies may be critical.

Solid Waste Disposal. Solid waste collection and disposal in Emeryville is performed by the Oakland Scavenger Company. Residential collection occurs every week, and

nonresidential collection is on a regular schedule established by the customer. There are no disposal facilities within the city. Solid waste is hauled to the company's transfer facility in San Leandro, south of the Oakland Airport, where it is transferred into larger trailer trucks for disposal at the company's Class II-I landfill in Altamont, east of Livermore.

Stormwater Drainage. The city's drainage system collects the stormwater runoff and discharges it into the bay at three locations: west of the freeway opposite 65th Street; near the south side of the Powell Street interchange, and at Temescal Creek. Demand on the storm drain system is greatest during periods when heavy rainfall is combined with high tides. Although the outfall lines appear to have the capacity to handle at least a 10-year storm, the collection system, in certain areas, lacks the ability to adequately transport the runoff to the outfalls. This is particularly evident in Christie Avenue north of Powell Street, where localized flooding occurs during heavy storms. The current capacity of the 54" outfall along Powell Street is severely impaired because of heavy siltation, and runoff is forced into a 60" relief pipeline that runs to Temescal Creek.

It is not anticipated that future development would increase the volume of runoff, because of the current "built-up and paved-over" nature of the entire area. Individual development would likely improve the collection system that connects to the outfall lines.

PUBLIC UTILITIES

Water Supply. The supplier of domestic water to the city is East Bay Municipal Utility District (EBMUD) which owns, operates, and maintains the existing system. EBMUD estimated Emeryville's 1983 average demand at 2.21 million gallons per day (MGD). The main water supply line is a 36"-diameter line in Hollis Street. The distribution system consists mostly of 8" and some 10" lines that create "loops" in a limited number of areas. At present, there are no identifiable, significant deficiencies in the system in terms of primary use for residential and nonresidential use or for emergency supply. However, many of the existing cast iron lines were installed in the 1920s and 1930s. These lines are replaced as required due to failure and are up-sized and replaced as required by development. Future flow increases can be handled by the 36" main in Hollis Street and no additional pump stations or reservoirs are required.

Wastewater Treatment. The existing sanitary sewer system consists of a series of collector lines running from east to west which are fed by laterals and a few north-south collectors. The main collector lines run westerly to Interstate 80 where they connect to a major interceptor pipeline that ranges in diameter from 66" just south of Ashby to 84" south of Temescal Creek. This major interceptor conveys wastewater to the EBMUD Sewage Treatment Plant. The collector lines are owned and maintained by the City of Emeryville and the interceptor is owned and operated by EBMUD. Sewage from the City of Oakland, upstream from Emeryville, also flows in those collectors.

The existing system appears to be totally adequate to handle the existing peak dry weather flow during which the interceptor flows at approximately one-third capacity. Because of a severe infiltration/inflow (I/I) problem, peak wet weather flow pushes the system beyond capacity during major storms. Future capacity required by

increased development must be provided either by additional pipelines or by alleviating the I/I. EBMUD has taken a major first step as the lead agency in an East Bay Infiltration/Inflow Study. Their final report will recommend a 20-year capital improvements program (capacity improvement and/or I/I correction projects) required to alleviate overflow problems due to I/I.

Other. Gas and electric service is provided by Pacific Gas & Electric. Gas mains are located underground within public rights-of-way. Electrical service is transmitted via underground and overhead utility lines. There are no major generation, transmission, or distribution facilities in the city. Information on energy consumption in the city is presented in the energy section of Chapter IX. Telephone service is provided by Pacific Bell.

VIII. ENVIRONMENTAL HAZARDS

INTRODUCTION

The early recognition and identification of responses to potential natural and man-made hazards to the city are fundamental to avoiding personal injury, loss of life, and property damage. A major focus of the safety element of a general plan, required of local jurisdictions by Government Code Section 65302(g), is to identify areas where land use decisions need to carefully consider natural and man-made threats to health and safety. Hazards associated with earthquakes include ground shaking and failure, liquefaction, lurching, compaction, settlement, and subsidence. Flood prone areas along the bay shoreline and Temescal Creek subject to seismically- and storm-induced events are also identified, as are hazards from contamination of hazardous waste materials. Fire hazards which also present risks to the community are discussed in the fire protection section of Chapter VII. In addition to the above, this section addresses issues concerning noise and its effects on land use decisions.

GEOLOGY

This section reports findings on the issues specified by state law under Government Code Section 65302(g), requiring the safety element to identify and appraise hazards to the community related to:

"... the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides, subsidence and other geologic hazards . . ."

Geologic Setting¹

Geologic History. The oldest predominant rock group in the Emeryville region (considered part of the San Francisco-Marin block) was deposited from late Jurassic to mid-Cretaceous time (100-140 million years ago). These rocks, known as the Franciscan Formation, are exposed in parts of San Francisco, Marin and San Mateo Counties and west of the Hayward fault zone in the Berkeley Hills. For the most part, however, they comprise the bedrock underlying the alluvium and waters of the bay.

Extensive folding and faulting of the earth's crust formed the predominant mountain range in the region, the Coastal Range. These movements also formed the trough that is now San Francisco Bay about 3 million years ago. The trough was filled with sediments during Pleistocene time (about 1 million years ago) from erosion of the surrounding hills and some marine deposits. Rising sea levels, caused by meltwater from glaciers in other parts of the world, flooded the trough to form the bay.

¹ This discussion is abstracted largely from Harold B. Goldman, "Geology of San Francisco Bay," in *Geologic and Engineering Aspects of San Francisco Bay Fill*, California Division of Mines and Geology Special Report 97, 1969.

Emeryville is situated on the eastern shore of San Francisco Bay on a broad alluvial plain between the mountains of the Coastal Range. The western ridge is situated on the San Francisco peninsula; the eastern ridge is part of the Berkeley Hills.

Bay Mud and Landfill. Layers of clayey gravel, silt, clay and gravel of the Temescal Formation, Merritt Sand and San Antonio Formation overlie the Alameda Formation on the plain between the Berkeley Hills and the bay, and underlie parts of the bay ("older bay mud"). Fine sand, silty clay, and mud of more recent age ("younger bay mud" deposited during the melting of the Wisconsin continental glaciers) overlie the first bay mud deposits and often comprise foundations for artificial fill along the perimeter of the bay. The younger bay mud, generally 15-30 feet thick, but reaching thicknesses up to 130 feet, was deposited within the last 9,000 years.

Bay mud underlies approximately one-third of the city, or most of the area west of the railroad tracks. This area has been artificially filled beginning about 1900, and continuing through the mid-1970s, when the fingertip of the peninsula was added to Emeryville. The fill is mostly clay and/or sandy soil interspersed with construction and industrial waste materials.

Surficial Soils. The remainder of the surficial soils in the city are predominantly fine-grained alluvium, which is plastic, moderately to poorly sorted carbonaceous silt and clay, less than 15 feet thick, and deposited in the late Holocene period (within the last 5,000 years). This overlies Late Pleistocene alluvium deposits, which are 10,000-30,000 years old. The Pleistocene deposits exist surficially to the east of the city. Groundwater generally can be found within ten feet of the surface, and in some areas within four feet of the surface.

Figure VIII-1 illustrates the surficial geologic units which make up the city as well as the historic margins of the bay. Table VIII-1 summarizes some of the properties and behavioral characteristics of the city's surficial soils. Based on these characteristics, the capability of the soils to accommodate urban development can be interpreted.

Geotechnical Hazards

Active Faults. Figure VIII-2 illustrates the faults in the Bay Area. Three major faults exist within the vicinity of Emeryville. The San Andreas fault, approximately 16 miles west of the city, is the most active fault in the region. Its two major branches on the east side of the bay, the Hayward and Calaveras faults, are located approximately 10 miles and 33 miles east of the city, respectively. A maximum credible earthquake, the largest earthquake, that is likely to occur on a given fault, is estimated at magnitude 7.3 on the Richter scale for the Hayward and Calaveras faults, and at magnitude 8.4 for the San Andreas fault.²

¹ City of Emeryville, Final Environmental Impact Report on the Amended Redevelopment Plan, August 1983, p. 125.

² Association of Bay Area Governments, Earthquake Hazard Mapping Project, Working Paper #17, December 1983, p. 5.

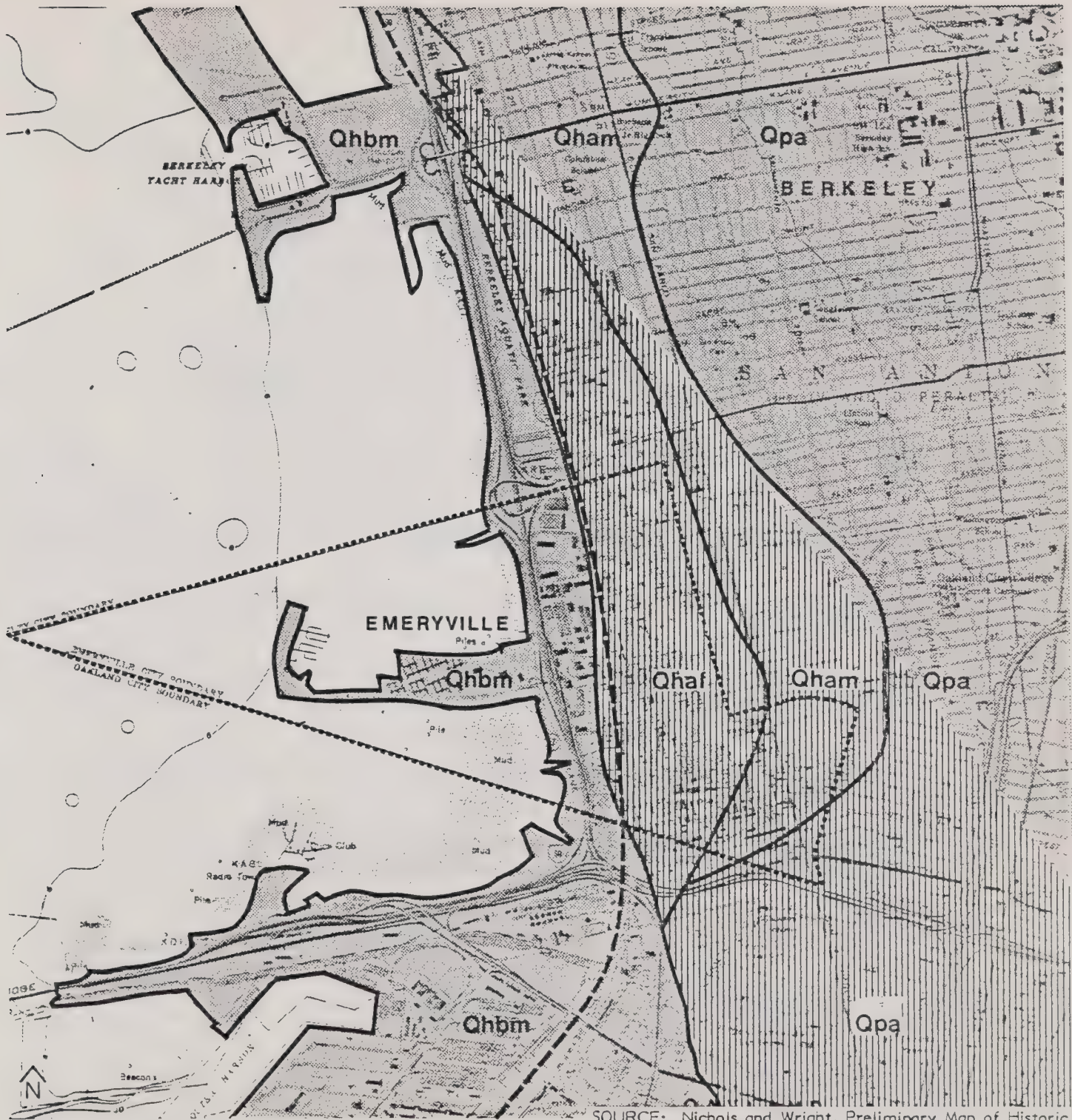


Figure VIII-1
GEOTECHNICAL HAZARDS

SOURCE: Nichols and Wright, Preliminary Map of Historic Margins of Marshland, 1971; Helley, et al., Flatland Deposits, 1979; Borchardt, Roger D., et al., Prediction of Maximum Earthquake Intensity, 1975.

GROUND SHAKING

 **VIOLENT**
 **VERY STRONG**



GEOLOGIC UNIT
MARSHLAND EDGE 1850

EMERYVILLE GENERAL PLAN

SEDWAY COOKE ASSOCIATES

Urban and Environmental Planners and Designers

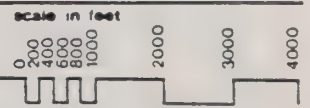


TABLE VIII-I
PROPERTIES OF EMERYVILLE'S SURFICIAL SOILS

	<u>Dry Density¹</u>	<u>Permeability and Drainage²</u>	<u>Seismic Wave Amplification³</u>	<u>Suitability of Urban Development⁴</u>
Qhbm- Bay mud	Low	Low	High	Low
Qhaf - Fine-grained alluvium	Moderate	Low	Low	Moderate
Qham - Medium-grained alluvium	Moderate	Low-Moderate	Low	Moderate
Qpa - Pleistocene alluvium	Moderate	Low Moderate	Low	High

Source: E.J. Helley et al., Flatland Deposits of San Francisco Bay Region, California, Geological Survey Professional Paper 943, 1979.

¹The mass of earth materials relative to an equal volume of water. Higher densities are generally better foundation materials.

²Permeability is the capacity to transmit a fluid. Low permeability may be associated with poor drainage and problems of standing water especially during the rainy season.

³Seismic wave amplification is the property to intensify the ground response to an earthquake. High amplification would suggest greater hazards from earthquakes.

⁴Suitability considers shrink-swell potential, settlement, flooding, permeability, liquefaction, and seismic wave amplification.

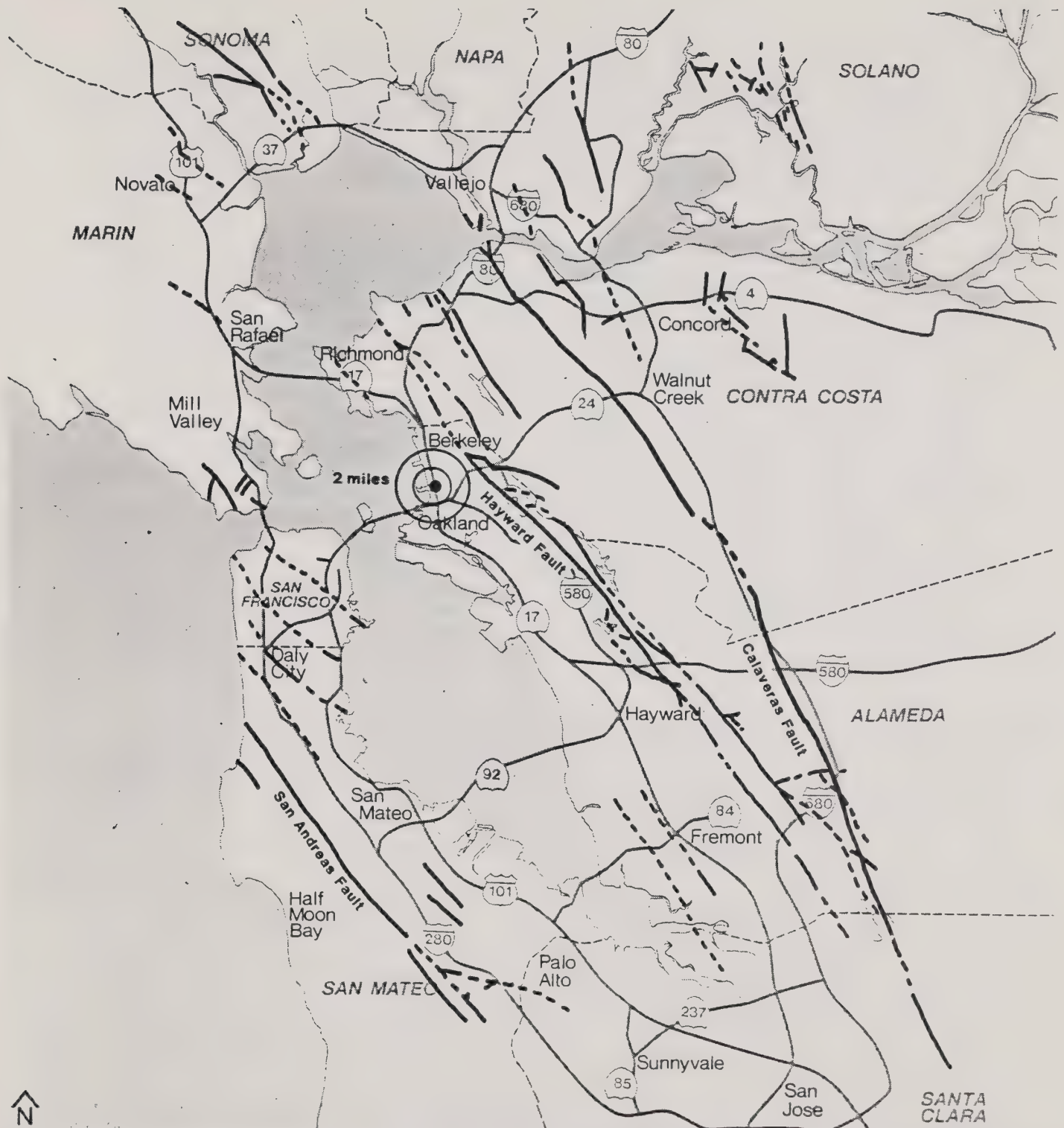


Figure VIII-2

REGIONAL FAULT TRACES

— FAULT

--- INFERRED FAULT

SOURCE: BCDC, The Bay Plan, September 1983; SCA; ABAG, Earthquake Hazard Mapping Program, March 1980; Goldman, Geologic and Engineering Aspects of San Francisco Bay Fill, 1969.

EMERYVILLE GENERAL PLAN

SEDWAY COOKE ASSOCIATES

Urban and Environmental Planners and Designers

Ground Shaking. Ground shaking is the most common result of seismic activity. Damage to buildings is the most immediate and recognizable result of considerable ground shaking. Maximum ground shaking intensity is a measure of the potential ground movement and is a function of the maximum credible earthquake for a given fault, the geologic properties of the area, and distance to the fault. The amount of damage sustained depends upon the intensity of the earthquake and the structure of the building.

Maximum ground shaking intensity for Emeryville is associated with the Hayward fault and is expected to be high, due to the relatively unstable soils and closeness to the fault. The scale of apparent intensity identified in Figure VIII-1 follows the San Francisco intensity scale developed by H. O. Wood¹ after the 1906 San Francisco earthquake. The area west of the railroad tracks could be subject to violent ground shaking. This shaking could cause widespread cracking and collapse in brick and wood frame buildings, cracking of streets, destruction of foundations, and breaking of utility lines. Southern Pacific Pipelines Inc. has an eight-inch pipeline that carries refined petroleum products from Richmond through Emeryville to Oakland. Intense ground shaking from an earthquake could damage the pipeline, creating a potential fire and groundwater contamination hazard. The rest of the city would be subject to very strong shaking, which could cause collapse of most masonry chimneys, considerable cracking of masonry buildings, some tilting and occasional collapse of wood frame buildings, and cracking and crushing of foundation walls.² In general, buildings constructed prior to 1965 are not reinforced. Most brick buildings and those with windows continuous to the corners of the structure can be considered as unreinforced structures. Concrete tilt-ups and other structures, erected after seismic safety requirements were added to the building code in 1965 and would not represent earthquake hazards.³

Alameda County, in its general plan, identifies structures built prior to adoption of earthquake safety standards as being hazardous, and encourages measures which will bring these structures up to current codes. The county plan emphasizes efforts to correct these hazards in high-risk areas and in high-occupancy buildings. Such actions would be applicable to Emeryville, where many industrial buildings are constructed of brick and are suitable for more intensive development.

Surface Rupture. No known faults lie within the city.⁴ Consequently, neither horizontal rupture nor vertical faulting should pose a danger.

Liquefaction. Liquefaction is the transformation of a granular material (such as sand) from a solid to a liquid state. In a solid state, sand grains are touching each other and the weight of overlying material (such as landfill) is supported by the

¹ 1908, cited in Roger D. Borchardt et al, Prediction of Maximum Earthquake Intensity in the San Francisco Bay Region, California, for Large Earthquakes on the San Andreas and Hayward Faults, U.S. Geological Survey MF-709, 1975.

² Ibid.

³ Bill Burke, Building Inspector, City of Emeryville, November 11, 1984.

⁴ Mary Dresser, "Land Stability Along the East Bay Shoreline," in The East Bay Shoreline: Selected Environmental Issues, June 1982, p. 34.

sand. Ground shaking from an earthquake can cause the grains of sand to be forced apart momentarily, allowing underlying water to filter up and the granular material to lose its cohesiveness. Liquefaction susceptibility, shown in Figure VIII-3, is primarily a function of soil type.

In Emeryville, the geologic materials most likely to liquefy are the water-saturated bay muds and their overlying fill.¹ If only the bay mud liquefies, buildings placed on top of the fill may experience differential settlement. If, in addition, the landfill liquefies, sand may flow from under buildings, causing them to collapse. Liquefaction potential is a function of earthquake magnitude, recurrence intervals, distance to active faults, and the likelihood of a soil type to be found in a liquid state. The likelihood of this occurrence is extremely low due to the relative infrequency of earthquakes of sufficient magnitude to cause liquefaction (less than 3%).²

A study performed by Woodward-Clyde Consultants for construction of Pacific Park Plaza³ indicated that complete loss of soil strength in the artificial fill would not be likely except in some locally loose pockets of sand. The study also found that sands below the groundwater level could experience some failure during moderate to strong shaking, which could cause settling of pile foundations.

Slope Stability. The terrain within the city is flat, with slopes of less than 5%. Slope stability therefore is not a serious problem, although the Bayfront area could be considered unstable because it is underlain by moist unconsolidated bay mud that is subject to flowage. Lands east of the Bayfront area are considered stable since they are level and not underlain by landslide deposits.⁴

Subsidence and Settlement. Subsidence is the gradual settling or sinking of an area with little or no horizontal motion. In the Bay Area, it is caused primarily by

¹ Mary Dresser, "Land Stability Along the East Bay Shoreline," in *The East Bay Shoreline: Selected Environmental Issues*, June 1982, p. 30; E.J. Helley, et al., *Flatland Deposits of the San Francisco Bay Region, California: Their Geology and Engineering Properties, and Their Importance to Comprehensive Planning*, Geological Survey Professional Paper 943, 1979, pp. 53, 55-56.

² Association of Bay Area Governments, *Earthquake Hazards Mapping Project*, Working Paper #4; Jeanne Perkins, Senior Regional Planner/Earthquake Program Manager, Association of Bay Area Governments, Oakland, California, November 13 and 20, 1984.

³ Woodward-Clyde Consultants, *Geotechnical Engineering Study, Final Design Report*, East Bay Park Condominiums, Emeryville, California, June 1981.

⁴ Tor H. Nilson, et al., *Relative Slope Stability and Land Use Planning in the San Francisco Bay Region, California*, Geological Survey Professional Paper 944, 1979.



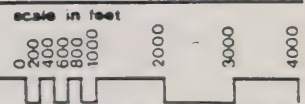
Figure VIII-3
LIQUEFACTION SUSCEPTIBILITY

SOURCE: ABAG, Earthquake Hazard Mapping Program, March 1980.

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excessive groundwater or natural gas withdrawal.¹ The rate of subsidence is not significant in Emeryville and is of little concern in the Bay Area, except in the South Bay and the delta.

Settlement is the gradual downward movement of an engineered structure (e.g., a building) due to the compaction of the unconsolidated material below the foundation. Three types of settlement can occur:

- pile settlement due to building loads;
- consolidation settlement in the layer of young bay mud; and
- seismically induced compaction settlement in artificial fill.

Artificial fill will settle over time, regardless of the quality and degree of compaction of the material. The amount of settlement depends on the compressibility of the mud, its depth, and the depth and density of the fill.²

Settlement can occur either uniformly or differentially. Uniform settlement in a building can create problems of poor drainage and potential failure of underground utility connections. Differential settlement can cause mechanical problems within a structure, although this can be minimized if the structural engineers are aware of the site conditions. For example, land which is subject to settlement can be surcharged before building or road construction; that is, a calculated load of temporary dirt fill can be placed on the soil for a predetermined period of time. This has the effect of forcing consolidation of the underlying soils.

Gradual long-term settlement can occur from consolidation of the bay mud by the weight of fill. Except for the tip of the peninsula (which is used as a park), all fill in Emeryville has been in place for over 20 years. Most long-term settlement is therefore virtually complete. If, however, grades are raised by more than one foot due to placement of new fills, additional consolidation settlement can be expected.³ Moreover, earthquake shaking can produce settlement in addition to that caused by consolidation. A study by Woodward-Clyde Consultants indicates that settlement of 1 to 1.5 inches could be expected in the location of Pacific Park Plaza.⁴ This settlement could affect underground utilities and surface-level pavement.

¹ E. J. Helley et al, Flatland Deposits of the San Francisco Bay Region, California: Their Geology and Engineering Properties, and Their Importance to Comprehensive Planning, Geological Survey Professional Paper 943, 1979, p. 45.

² Mary Dresser, "Land Stability Along the East Bay Shoreline," in The East Bay Shoreline: Selected Environmental Issues, June 1982, p. 34.

³ Derived from Woodward-Clyde Consultants, Geotechnical Engineering Study, Final Design Report, East Bay Park Condominiums, Emeryville, California, June 1981, p. 13.

⁴ Woodward-Clyde Consultants, Geotechnical Engineering Study, Final Design Report, East Bay Park Condominiums, Emeryville, California, June 1981.

FLOOD HAZARDS

Consideration of water-related hazards is required by several sections of state planning law. Specifically, plans for flood control and appraisals of potential for tsunami inundation must be addressed under the provisions for a conservation element (Government Code Section 65302(d)) and for a safety element (Government Code Section 65302(g)).

Seiches and Tsunamis. Seiches, waves produced by seismic disturbances within an enclosed body of water, represent no threat to the city of Emeryville, as there are no major dams or reservoirs adjacent to the area. Tsunamis, often incorrectly referred to as tidal waves, are caused by submarine seismic or volcanic disturbances. The waves increase in size with the distance traveled.

The U.S. Geological Survey estimates that a 20-foot wave at the Golden Gate Bridge (an event that is estimated to be possible once every 200 years) could potentially cause runup of a 10-foot wave in the Emeryville peninsula and shoreline area (see Figure VIII-4).¹ It should be emphasized that the occurrence of a 20-foot wave, although possible, is highly unlikely; during the period 1868-1968, 19 tsunamis were recorded at the Golden Gate tide gauge and a maximum height was 7.4 feet.²

Storm-Induced Flooding. Emeryville participates in the National Flood Insurance Administration program, which provides federal flood insurance subsidies and federally financed loans for property owners in flood prone areas. As a condition for receiving this insurance, communities must develop and implement flood plain regulations. Studies related to this program resulted in the development of Flood Insurance Rate maps, which established flood risk zones for insurance.³ These maps were rescinded from the program for Emeryville in 1976, as studies indicated that Emeryville does not face a significant flood hazard. Nevertheless, the city participates in the program without the maps. Flood insurance is therefore still available at subsidized rates, but it is not mandatory.⁴ If more of the bay is filled, storm-induced flooding potential should be further investigated. At one time, Temescal Creek posed a flood problem, but it has since been contained and improved to accommodate the 100-year storm.⁵

¹ Donald R. Nichols, and Nancy A. Wright, Preliminary Map of Historic Margins of Marshland, San Francisco Bay, California, U.S. Geological Survey Open File Report, 1971.

² Ibid.

³ Bill Brick, Chief of Water Resources Branch, Army Corps of Engineers, November 29, 1984.

⁴ Ray Lenaburg, Civil Engineer, Federal Emergency Management Agency, November 29, 1984.

⁵ City of Emeryville, Final Environmental Impact Report on the Amended Redevelopment Plan, August 1983, p. 128.

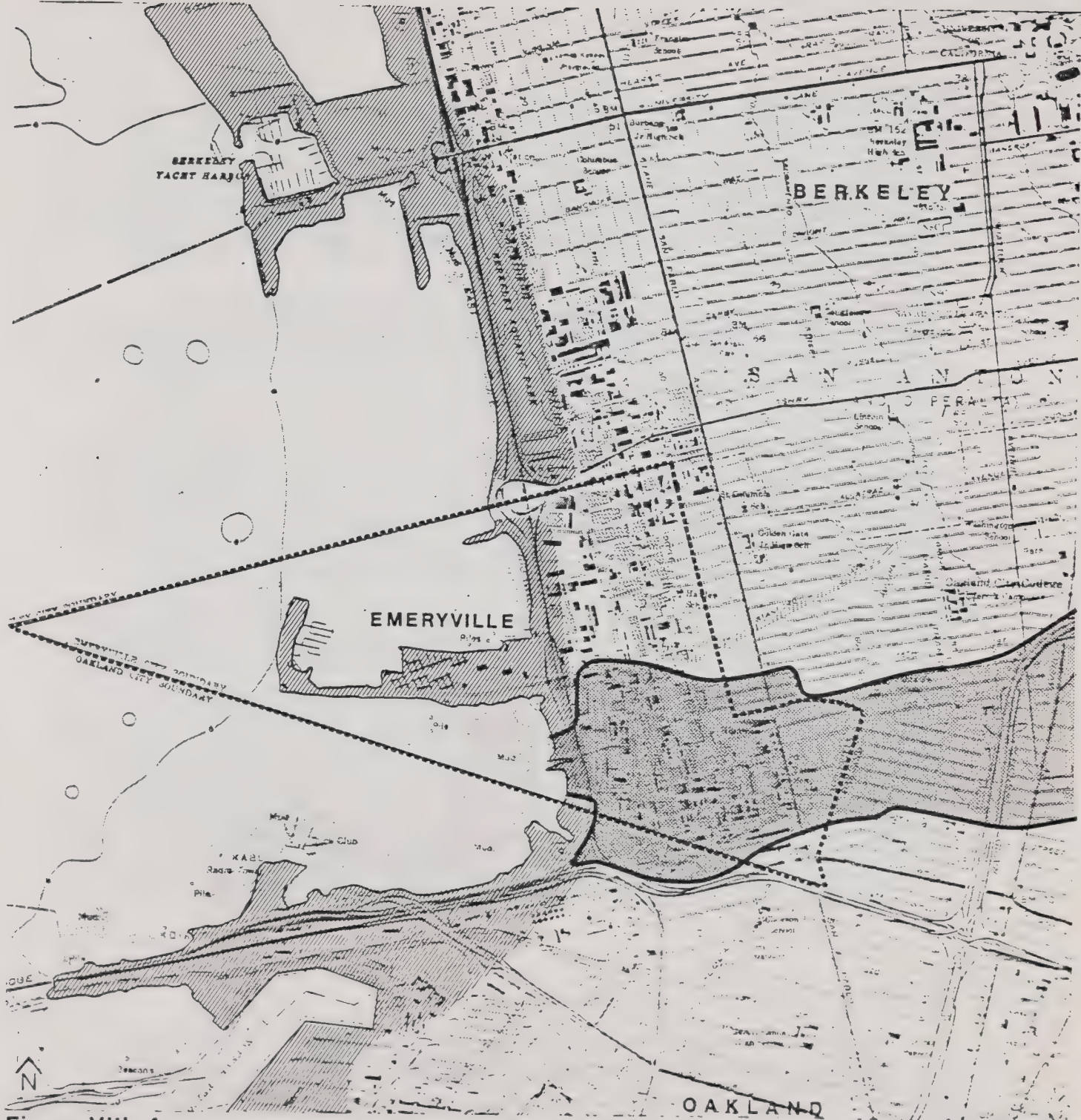


Figure VIII-4
FLOOD HAZARDS

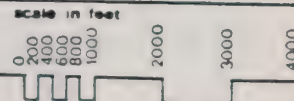
SOURCE: Ritter and Dupre, Maps Showing Areas of Potential Inundation by Tsunamis, 1972; Alameda County Flood Control and Water Conservation District, 1973.

 TSUNAMI INUNDATION
  DAM INUNDATION (LAKE TEMESCAL)

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Dam Inundation. Failure of the dam at Lake Temescal, which drains through Temescal Creek, would present a potential flooding hazard, as illustrated in Figure VIII-4. Dam failure, which could occur with significant seismic activity, would cause Temescal Creek to overflow its banks. Within 15 minutes an area nearly 1,000 feet on either side of the creek in the Triangle area would be inundated, and within 25 minutes, the water could reach the rest of the city west toward the bay and north approximately to Powell Street.¹

HAZARDOUS SUBSTANCES

Management of hazardous substances within Emeryville requires an understanding of the use, transport, and disposal of all substances which may, if managed improperly, prove injurious to human health and safety. The first part of this section addresses the definition of hazardous wastes, the state's regulatory role, and an assessment of contamination in Emeryville. This discussion is followed by a description of storage, disposal, and spill procedures.

Hazardous Waste and Contamination Hazards. Hazardous wastes, defined as substances, materials, or liquids which are left over or generated from chemical processes, are regulated by the California Department of Health Services (DOHS). The state's hazardous waste control laws (Health and Safety Code Sections 25100-25249) give the DOHS the authority to regulate the storage, transport, and disposal of specified types and amounts of these wastes.

In cases of contamination of soil or land by improperly handled hazardous wastes, the DOHS has the authority to designate a property as a "hazardous waste property" and lands within 2,000 feet of the contaminated site as "border zone properties" (Health and Safety Code Section 25117.3). Changes in land use or the subdivisions of lots are restricted on hazardous waste or border zone properties. In cases of contaminated groundwater caused by hazardous waste leaking from contaminated soil, the Regional Water Quality Control Board (RWQCB) has the authority to compel actions to protect groundwater and surface water quality (Porter-Cologne Water Quality Act). Because of the close relationship between soil and groundwater contamination, these two agencies must coordinate their regulation and enforcement jurisdictions.

Contamination in Emeryville. Four sites in Emeryville contain evidence of hazardous waste soil and/or groundwater contamination:

- Westinghouse (on Peladeau Street);
- ITT Grinnell (on Hollis Street);
- Electro-Coatings (on Park Boulevard); and
- the Emeryville Marketplace (on Shellmound Street).

These sites have been designated by state and federal agencies for study and mitigation of possible public health effects. Westinghouse and ITT Grinnell have

¹ Rubin Nino, Alameda County Flood Control, November 16, 1984.

been designated as hazardous waste properties by the DOHS.¹ Westinghouse and Electro-Coatings have also been designated as "uncontrolled hazardous waste disposal sites" on the state "superfund" list, giving them priority for mitigation (clean-up).² The U.S. Environmental Protection Agency (EPA) through the federal superfund, has designated the Westinghouse and Electro-Coatings sites as possible sources of groundwater contamination.³ This designation directs federal attention to determine if mitigating measures are necessary or required.

Soils in the Emeryville Marketplace have been found to contain contamination levels for heavy metals exceeding DOHS standards. This site contains several underground tanks from a previous paint products operation. The contaminants have been determined to represent no threat to groundwater supplies, as they are sealed off from the surface asphalt parking lot (and from potentially leaking rainwater).⁴

Emeryville residents and city officials have expressed concern over existing contamination problems and the potential problems created by new industries moving into the city, particularly as the city begins to attract so-called "high technology" firms, including those performing research in genetic engineering. In response to these issues policies will be formulated as part of the planning program.

Storage and Disposal. Hazardous materials are currently used in industrial operations by several Emeryville companies located along Bay, Horton and Shellmound Streets.⁵ The storage of these materials is identified locally by the Fire Department, which conducts an annual inspection of all businesses in the city. Current procedures require businesses to notify the fire marshall of specific hazardous substances utilized by the firm, and the amounts stored on the premises. The Fire Department is specifically charged with regulating flammable substances.

The Sher Bill, AB 1362 (1983), will regulate underground storage of hazardous substances. The Alameda County Division of Health Services will implement the provisions of the bill.⁶

¹ Lloyd A. Batham III, Program Manager, Hazardous Waste Property Evaluation Unit, Hazardous Materials Management Section, California Department of Health Services. Letter to Mark Buell, Emeryville City Planning Department, April 10, 1984.

² Association of Bay Area Governments, Hazardous Waste Management: A Guide for Community Involvement in the San Francisco Bay Area, September 1983.

³ State of California, Assembly Office of Research, Is Our Water Safe to Drink?, Appendix B: Potential Water Contamination from Superfund Sites, April 1983.

⁴ Woodward-Clyde Consultants, Assessment of Subsurface Contaminants: Marketplace Property, Emeryville, California, May 1982.

⁵ Bill Burke, Building Inspector, City of Emeryville, November 27, 1984.

⁶ Ted Geroni, Alameda County Division of Environmental Health, December 13, 1984.

Response to Spills. Improper storage, handling or disposal of hazardous substances may result in human injury or death. Local, state, and federal regulations have been designed to avoid this occurrence, and plans drafted by the State Office of Emergency Services (OES) and local agencies have addressed the issue of interagency coordination and response to accidents. In California, the State OES is ultimately responsible for coordinating local, regional, state, and federal agencies.

The Association of Bay Area Governments has drafted a plan in response to the need for regional involvement in this issue.¹ The first part of this study involved an assessment of risk. Land near the bay in northern Alameda County, including Emeryville, is identified as a high-risk area for hazardous spills due to the materials in use by the industries in this area.² Southern Pacific Railroad is identified as a major carrier of hazardous materials.²

A second section of the plan details planning and regulatory tools aimed at prevention of accidents. These tools include:

- zoning restrictions, intended to separate hazardous materials from population concentrations;
- transportation regulations, defined by numerous state and federal legislative acts, and enforced by numerous local, state, and federal agencies; and
- local enforcement, including on-site inspections and civil injunctions in cases where requirements are not being met.³

Response to accidents is a third aspect of the plan. Generally, an observer of a spill or the responsible party will alert the local emergency dispatch (police, fire, OES), who will activate local response networks and notify coordinating agencies such as the State OES. This will activate the County Mutual Aid Program and involve one of the hazardous materials response (HAZMAT) teams made up of specialized local government teams, industrial cooperatives, and private clean-up and transport companies.

EMERGENCY SERVICES

It is the responsibility of the State OES "to assist local governments in preparing for, responding to, and recovering from the effects of a disaster." This includes providing planning guidance and funding, disaster coordination and assessment, and recovery assistance such as funding. Emeryville's disaster control plans presumably dovetail with those of the state and county Offices of Emergency Services. However, the roles and responsibilities of city and county agencies are not clearly understood by one another.

¹ Association of Bay Area Governments, San Francisco Bay Area Hazardous Spill Prevention and Response Plan, Volume I: Issues and Recommendations, December 1982 (draft).

² Ibid, p. IV-5.

³ Ibid, pp. V-10 to V-15.

In an earthquake scenario developed by the Division of Mines and Geology in 1982 to evaluate emergency preparedness, it was determined that Interstate 80 and all overpasses in Emeryville would fail. Traffic in the city would then be diverted to San Pablo Avenue for evacuation. In case of other disasters (e.g., military attack, toxic spill, flood) in which the overpasses and freeways remained operable, the MacArthur (Interstate 580) and Eastshore (Interstate 80) freeways would be the preferred evacuation routes, depending on the location and type of emergency.

NOISE

The recognition of noise and measures to minimize its effects are required by the State Government Code (Section 65302(f)). Excessive noise levels not only disturb one's concentration and ability to interact with others, but also may have adverse psychological and physiological effects. The primary noise sources in the city are transportation corridors such as Interstate 80, truck routes, the Southern Pacific Railroad lines, and industrial activities.

Noise Measurements. Decibels (dB) are a unit of measure used to indicate sound intensity. Because the human ear does not hear all sounds equally well, various scales have been devised to adjust dB measurements. The scale that results in sound level best approximating the frequency response of the average ear is the "A-scale," and measurements using this weighting system are written as dBA.

A number of different noise descriptors are used to characterize noise. Among these are:

- Le_q : the equivalent energy level. This sound level corresponds to a steady state sound level containing the same total energy as a time varying signal over a given sample period. Thus, $Le_q(24)$ is the average sound level over a 24 hour period.
- L_{10} : the A-weighted sound level exceeded 10 percent of the sample time. Similarly, L_{50} is the A-weighted sound level exceeded 50 percent of the time. Federal highway noise guidelines are expressed in terms of these descriptors.
- L_{dn} : the day-night average level. This commonly used descriptor gives an average equivalent A-weighted sound level during a 24-hour day, after increasing the sound levels between 10 p.m. and 7 a.m. Increasing the sound levels by 10dB during this period has the effect of increasing the average noise level to reflect the fact that people are more sensitive to noise disturbances at night.
- **CNEL:** Community Noise Equivalent Level. This descriptor is similar to the L_{dn} , except that it also increases the sound levels between 7 p.m. and 10 p.m. by 5 dB. The state requires the use of this description or the L_{dn} to characterize noise sources in a jurisdiction's general plan.

Noise Sources. Vehicular traffic along Interstate 80 is a major noise source in Emeryville. Excessive noise levels have been detected along the freeway, such as at Powell Street where average noise levels have been measured in excess of 80 dBA for

10 percent of the time. Noise levels on the east side of the freeway tend to be higher because of the prevailing southwesterly winds. Future noise conditions will depend on traffic volumes on the freeway. Noise contours based on year 2005 traffic volumes show the different noise exposure levels in the city. The 60 dBA contour (L_{10}) which is the desired outdoor maximum level for residential areas extends west to the Watergate complex and east just across the Southern Pacific railroad lines. The 70 dBA contour (L_{10}) which is the desired outdoor maximum level for commercial areas extends west to include the Holiday Inn site and east to Christie and Shellmound.

Rail traffic on the main tracks through the city is another local source of noise. The extent to which adjacent land uses will be impacted, depends largely upon the magnitude and frequency of train operations and the time of their occurrence. Measurements as high as 89 dBA have been recorded at night.¹ It is expected, however, that rail-dependent industries would gradually relocate as the city redevelops and the economic feasibility of preserving heavy industrial, large-scale manufacturing activities diminishes. Consequently, rail operations are not likely to be as significant a noise source in 15-20 years as they are now.

A key consideration in the development of the community is the planning and design of land uses so that they are "noise compatible" with one another. Noise from plant operations as well as their associated trucking activity may be within acceptable limits for industrial districts but are inappropriate for residential districts. One of the problems currently experienced by the city is the location of industrial uses adjacent to residential areas, particularly along the border between Central Emeryville and the North End and in the Triangle. Because of the city's land use organization and the absence of defined truck routes, a number of residential streets experience heavy truck traffic. For example, 55th, 64th, and Ocean Avenues and the east/west avenues in the Triangle are streets where truck traffic noise has been cited as a problem by local residents. These types of noise/land use compatibility issues have been generally identified in Figure III-1 and to a large extent correspond to the noise improvement areas identified in the city's existing General Plan (the Peninsula west of the freeway, the residential/industrial area around A.C. Transit and Del Monte, the area along San Pablo and Adeline).² As the city's land use changes from its predominantly manufacturing/wholesaling economic base, these types of noise/land use conflicts are expected to diminish. With more intensive development, however, the city can expect greater traffic volumes and thus traffic noise will increase.

Noise Standards. As a guide to land use noise compatibility, the city in its existing General Plan identifies maximum noise levels suitable for residential, commercial, and industrial uses. These standards are presented in Table VIII-2.

¹ City of Emeryville, Final Environmental Impact Report on the Amended Redevelopment Plan, August 1983, pp. 96-98.

² City of Emeryville, General Plan, Volume II, August 1975, p. 31.

TABLE VIII-2
 AMBIENT NOISE/LAND USE PLANNING CRITERIA

Maximum Outdoor Noise Level (dBA)

<u>Land Use</u>	<u>L₅₀</u>		<u>L₁₀</u>	
	<u>Day</u> <u>(7 a.m.-10 p.m.)</u>	<u>Night</u> <u>(10 p.m.-7 a.m.)</u>	<u>Day</u> <u>(7 a.m.-10 p.m.)</u>	<u>Night</u> <u>(10 p.m.-7 a.m.)</u>
Residential	55	50	60	55
Commercial	65	60	70	60
Industrial	70	65	75	75

Maximum Indoor Noise Level (dBA)

<u>Land Use</u>	<u>L₅₀</u>		<u>L₁₀</u>	
	<u>Day</u> <u>(7 a.m.-10 p.m.)</u>	<u>Night</u> <u>(10 p.m.-7 a.m.)</u>	<u>Day</u> <u>(7 a.m.-10 p.m.)</u>	<u>Night</u> <u>(10 p.m.-7 a.m.)</u>
Residential	45	40	50	45
Commercial	55	50	60	60
Industrial*	60	60	65	65

Source: City of Emeryville, General Plan, Volume II, August 1975, p.29.

*Indoor industrial standards are set by the Occupational Safety and Health Administration

IX. ENVIRONMENTAL RESOURCES

INTRODUCTION

Natural resources offer ecological or economic benefits as well as represent valuable scenic amenities and recreational opportunities. State law requires cities and counties to identify natural resources and to prepare and implement policies guiding their management. The legislative requirements, outlined in the Government Code, include:

- Section 65302(d) which requires the preparation of a conservation element to guide the conservation, development, and utilization of natural resources.
- Sections 65560, et seq., which require the preparation of an open space element specifying open space land for the preservation of natural resources, the managed production of resources, outdoor recreation, and public health and safety.

Accordingly, the environmental resources element of the Emeryville General Plan will identify lands of ecological value and specify responses for the protection of plant and animal life. It will address the proper use and protection of resources which are expended or affected by human activity, such as energy and water resources. Although not required by state law, the element will also address issues of cultural and historical interest, such as significant archaeological remnants and buildings or areas of architectural or historical merit. An awareness of Emeryville's past is desirable as a means of preserving valuable remnants of culture and history as well as promoting cultural enrichment and civic pride among Emeryville's citizens.

The focus of this chapter is to identify the city's resources with intrinsic natural, cultural, or historic value. The ultimate intent of the element is not to prohibit the development or use of natural and cultural resource areas; rather, it is to increase access where this access will not destroy the natural or cultural value of an area, and to encourage public education and participation in the protection of natural or cultural resources. The discussion here must be considered in conjunction with those of land use, environmental hazards, and urban design, because the development of open space, recreational areas directly influences the use, compatibility, and desirability of adjacent land uses; the designation of open spaces can serve to protect public health and safety; and the design and use of open space, including viewsheds, landmarks and historic centers, influences the physical appearance and design of the city. Resources, as discussed in this chapter, include the city's wildlife and wildlife habitats, parks and open spaces, water and air quality, energy resources, and cultural resources.

BIOLOGICAL RESOURCES

Emeryville is almost entirely urbanized and no known wildlife or important plant communities exist east of the freeway. West of the freeway, in the area south of Powell Street commonly known as Emeryville Crescent, shorebirds and marine life thrive in the tidal salt marsh.

Salt Marsh. The Emeryville Crescent is one of the few salt marshes in existence alongside the San Francisco Bay, as almost 80% of East Bay marshes have been destroyed by man's activities.¹ These salt marshes are essential to the bay ecosystem because they oxygenate the water, an activity which is essential for the support of marine life. The Audubon Society has identified these marshes as an important feeding and resting area for shorebirds and a source for nutrients and organic matter for the intertidal mudflat communities and bay estuarian waters.

The marsh is a fragile environment. The native pickleweed vegetation is extremely sensitive to trampling and regenerates slowly.² Additionally, marsh soils are easily compacted by trampling, which creates a "hard-pan" surface that resists marsh revegetation by increasing soil salinity and decreasing soil moisture.³ Near the eastern limits of the community, the mudflats have been almost completely stripped of pickleweed because of the erection of the driftwood sculptures.

Preservation of the salt marsh community is a priority among local interests, as well as regional, state, and federal agencies such as the San Francisco Bay Conservation and Development Commission (BCDC); the State's Coastal Conservancy, Department of Parks and Recreation, and Department of Fish and Game; and the U.S. Fish and Wildlife Service. Within its boundaries, the Emeryville Crescent contains a number of federal- and state-listed endangered species, identified below, that would be seriously affected by further destruction of the salt marsh environment.

Flora and Fauna. The State Department of Fish and Game maintains an inventory of rare and endangered species by location called the Natural Diversity Data Base. A species is considered "endangered" when the prospects of its survival and reproduction are in immediate jeopardy. It is "rare" when, although it is not presently threatened with extinction, it is found in such small numbers that it may become endangered if its environment worsens.⁴ Use of the list does not satisfy environmental review of a project under the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), or other statutory or regulatory authority, because, as the Natural Diversity Data Base notes, the absence that the species or community does not exist in the area, only that it has not been entered into the agency's inventory.⁵

Flora. Salt marsh vegetation grows in zones which are related to the tolerance of the species to salt water. The spits around the mouth of Temescal Creek are

¹ California Department of Parks and Recreation, East Bay Shoreline: Feasibility Study, December 1982, p. 10.

² David Olson, "The Salt Marsh Harvest Mouse in the Emeryville Crescent Marsh," in *The East Bay Shoreline: Selected Environmental Issues*, June 1982, p. 142.

³ *Ibid.*, pp. 142-143.

⁴ California Department of Fish and Game, Natural Diversity Data Base, Rare and Endangered Plants and Animals in the Oakland West 7-1/2' Quadrangle, November 9, 1984.

⁵ *Ibid.*

covered with upland vegetation, which includes gumplant, coyote bush, arroyo willow, and a variety of herbaceous plants and grasses. Pickleweed, saltgrass, iceplants and sea lavender are found in the mudflats, where plants must tolerate occasional saltwater immersion. This zone averages 100 meters wide and is extensively trampled by driftwood sculptors.¹ Cordgrass, which tolerates regular tidal submersion, grows along the water's edge.

The California Department of Fish and Game's Natural Diversity Data Base identified the adobe sanicle (sanicula maritima) as a plant which once inhabited the area. Presumed extinct in the Emeryville Crescent, it is listed as an endangered species in California and as a Category 2 candidate for protection on the federal listing. In addition, Santa Cruz tarweed (holocarpha macradenia) may exist in the vicinity. This plant species is listed as endangered in California and as a Category 1 candidate on the federal lists. Its location is non-specific, identified as possibly occurring within a five-mile radius of University Avenue in Berkeley.²

Fauna. Several species of wildlife typically inhabit tidal marshes. Mammals known to inhabit the area include rats (rattus norvegicus), house mice (mus musculus), and California moles (microtus Californicus). Along the East Bay shoreline, black-tailed jackrabbits, pocket gophers, roof rats, western harvest mice, ornate shrews, house cats and several species of bats may exist.³ The occurrence of these species may extend into the Emeryville Crescent.

The existence of the Salt Marsh Harvest Mouse (reithrodontomys raviventris), identified on both state and federal endangered species lists, has been documented in the Emeryville Crescent. This is the only rodent which is able to spend its entire life within the salt marsh environment. Tall, thick pickleweed is its optimal habitat, providing the bulk of its diet and protection from predators. The Harvest Mouse exists mainly to the south of the Emeryville border, where pickleweed grows thickly. Trampling⁴ of pickleweed in the Emeryville mudflats has destroyed its habitat in that area.

The entire East Bay shoreline serves as an important resting and feeding area for resident and migratory birds. Over 120 species of birds have been observed in the

¹ David Olson, "The Salt Marsh Harvest Mouse in the Emeryville Crescent Marsh," in *The East Bay Shoreline: Selected Environmental Issues*, June 1982, pp. 138-139.

² California Department of Fish and Game, *Natural Diversity Data Base, Rare and Endangered Plants and Animals in the Oakland West 7-1/2' Quadrangle*, November 9, 1984.

³ California Department of Parks and Recreation, *East Bay Shoreline: Feasibility Study*, December 1982, pp. 10-11.

⁴ David Olson, "The Salt Marsh Harvest Mouse in the Emeryville Crescent Marsh," in *The East Bay Shoreline: Selected Environmental Issues*, June 1982, pp. 135-146.

area.¹ According to studies by the State Departments of Fish and Game and Parks and Recreation,² four rare and endangered species are known to use the area:

- The California Clapper Rail (Rallus longirostris obsoletus) is likely to reside where marsh grass is predominant. This bird was nearly extinct in 1913, before the Migratory Bird Act was enacted and help increase its numbers.³
- The California Black Rail (Laterallus jamaicensis coturniculus), a rare species on the state list, has been observed.
- A stable population of the California Least Tern (Sterna antillarum browni), endangered on both state and federal lists, is known to exist at the Alameda Naval Air Station and visits the Crescent during the summer breeding season.
- The endangered California Brown Pelican (Pelecanus occidentalis Californicus) is a common sight from summer through late fall.

Additional bird species sighted specifically within the Emeryville Crescent include the Great Blue Heron, Yellow Rail, Virginia Rail, Semipalmated Plover, Killdeer, Black-Billed Plover, Least Sandpiper, Western Sandpiper, Dunlin, Short-Billed Dowitcher, Savannah Sparrow, short-eared owl and song sparrow, as well as egrets, ducks and gulls.⁴

The snowy plover (Charadrius alexandrinus), double-crested cormorant (Phalacrocorax auritus), white pelican (Pelecanus erythrorhynchos) and long-billed curlew (Numenius Americanus) are among the "species of concern" found within the East Bay shoreline. This is also the only location on the North American Pacific Coast where the arctic tern has been known to land on shore.⁵ The short-eared owl (Asio flammeus) and the song sparrow (Melospiza melodia) are also on the "species of concern" list.

According to the State Department of Parks and Recreation, the tidal mudflats are rich in invertebrate life, which includes worms, nemotodes, crabs, and several

¹ California Department of Parks and Recreation, East Bay Shoreline: Feasibility Study, December 1982, p. 12.

² California Department of Fish and Game, Natural Diversity Data Base, Rare and Endangered Plants and Animals in the Oakland West 7-1/2' Quadrangle, November 9, 1984.

³ California Department of Fish and Game, Natural Diversity Data Base, Rare and Endangered Plants and Animals in the Oakland West 7-1/2' Quadrangle, November 9, 1984; California Department of Parks and Recreation, East Bay Shoreline: Feasibility Study, December 1982.

⁴ City of Emeryville, Final Environmental Impact Report on the Amended Redevelopment Plan, August 1983, p. 122.

⁵ California Department of Parks and Recreation, East Bay Shoreline: Feasibility Study, December 1982, p. 12.

species of clams, oysters and mussels. The waters of the bay host species of perch, flounder, smelt and anchovy, and the Emeryville Crescent specifically has been noted as a spawning area for striped bass.¹

Man's Influence on the Salt Marsh. Students from the California College of Arts and Crafts in Oakland erected the first mudflat sculptures in the early 1960s, using driftwood and whatever else had washed ashore. The students were studying the work of Kurt Schwitters, a German artist known for his sculptures created from odds and ends of commerce.² Since then, people have been using the Crescent as a canvas for their driftwood art, and the "sculpture garden" has attracted people who have used it for recreational and visual purposes.

Initially, the sculptors only used natural materials and the thrust of the work was merely artistic. In the late 1960s the driftwood sculptors began to use the mudflats as a political arena, expressing political and social views and importing materials to create the sculptures when necessary. Popular literature documented the activities, and the sculpture garden became the "People's Art Gallery," enjoying great local fame.³

Although the sculptures were initially visual attractions, their construction has severely damaged the salt marsh ecology. According to a study on the effects of human activity on the marsh, this rare community was experiencing significant soil compaction. Unchecked, soil compaction can prevent root penetration and seedling emergence; decrease soil permeability; result in increased salinity beyond the tolerance of the vegetation; increase alkalinity, which can disturb the nutritional balance of vegetation; and cause crusts to form on the soil. Natural recovery of the marsh, assuming that human activity is curtailed completely, can take 50 years.⁴ Today, many sculptures are no longer works of art and in some cases, have become eyesores.

Public access to the tidal marsh has become controversial and public agencies are divided on the question. On one hand, the activities of the sculptors, picnickers, sightseers and their animals can disturb the habitats of endangered creatures of the Crescent. On the other hand, controlled access and provision of educational materials and exhibits can heighten users' awareness of the sensitivity of the resource and promote conservation. As Emeryville develops, opportunities to enhance public access and conservation of the salt marsh must be carefully balanced and reviewed in the context of local and regional interests.

¹ California Department of Parks and Recreation, East Bay Shoreline: Feasibility Study, December 1982, p. 13.

² California Department of Parks and Recreation, East Bay Shoreline: Feasibility Study, December 1982, p. 14; Lisa Cohen, "Emeryville Crescent: The Sculpture Garden Controversy," in The East Bay Shoreline: Selected Environmental Issues, June 1982, p. 166.

³ Lisa Cohen, "Emeryville Crescent: The Sculpture Garden Controversy," in The East Bay Shoreline: Selected Environmental Issues, June 1982, pp. 166-167.

⁴ James K. Doyle, "Characteristics of Trampled Marsh Soil and Potential for Rehabilitation," in The East Bay Shoreline: Selected Environmental Issues, June 1982, pp. 155-162.

OPEN SPACE AND PARKS

Inventory of Existing Resources. The following inventory identifies the city's public open space and outdoor recreation resources. Private facilities such as health clubs or tennis courts have not been documented.

Schools. In Emeryville's older residential areas, schools often represent the only open space recreational resource. Anna Yates School, in the Triangle off 43rd Street, includes a paved playground on two acres of land, most of which is developed with structures. The school buildings and playing fields of Emery High School, located at San Pablo Avenue and 53rd Street, occupy eight acres of land.

Parks. One "vest-pocket park" at 63rd and Doyle Streets serves residents in the North End to some extent. This mini-park, which measures about 50 feet by 200 feet, contains play equipment for youngsters. The picnic area at the tip of the Peninsula serves as the city's only major open space. It is also the least accessible to many residents. A path along the southern shoreline is supposed to be constructed in accordance with conditions set by the BCDC when the new City Hall was built. The city's poor financial condition and erosion problems along the shoreline have delayed the pathway's construction. The city maintains that the shore needs to be repaired before the path is built; otherwise both the shoreline and path would erode. In addition, the installation of riprap to repair the shoreline would damage the path, if it were built before the riprap was installed. Nevertheless, the Peninsula's prominent location and developed recreational facilities help serve regional needs as well as local open space needs. Figure IX-1 shows the location of the city's recreational/open space resources.

Ashby Spit. The Ashby Spit is a narrow strip of land totaling about 3.5 acres. Although undeveloped, the area has been used by people for sightseeing, fishing, clamdigging, and jogging. The Spit offers a panoramic view of the bay and opposite shorelines. A fence currently prevents access to the Spit.

North Frontage Road. Along the Frontage Road is a narrow strip of concrete debris and makeshift riprap often used by people fishing or sightseeing.

Emeryville Crescent. The Emeryville Crescent, shown in Figure IX-1, is a tidal marsh critical to the San Francisco Bay's overall ecosystem. The ecological boundaries of the Crescent fall within Oakland and Emeryville, and it encompasses a total of 500 acres. Fed by Temescal Creek, a freshwater stream, it includes mudflats and shallow bay waters in addition to marshland. Because the Crescent serves as an important shorebird roost and striped bass spawning area and supports rare and endangered plant and animal species, its fragile environment is highly vulnerable to human activities. Yet the Crescent has been disturbed over the years by sightseers and driftwood sculptors and future efforts to protect this resource must determine an acceptable degree of public access.

Public Trust Lands. When California entered the Union in 1850, it took ownership of all tidal and navigable waters and the lands under them, to hold in public trust for the people of the state. Notwithstanding this trust, large tracts of land were sold to private parties by the Board of Tide Land Commissioners (BTLC), created in 1868 to

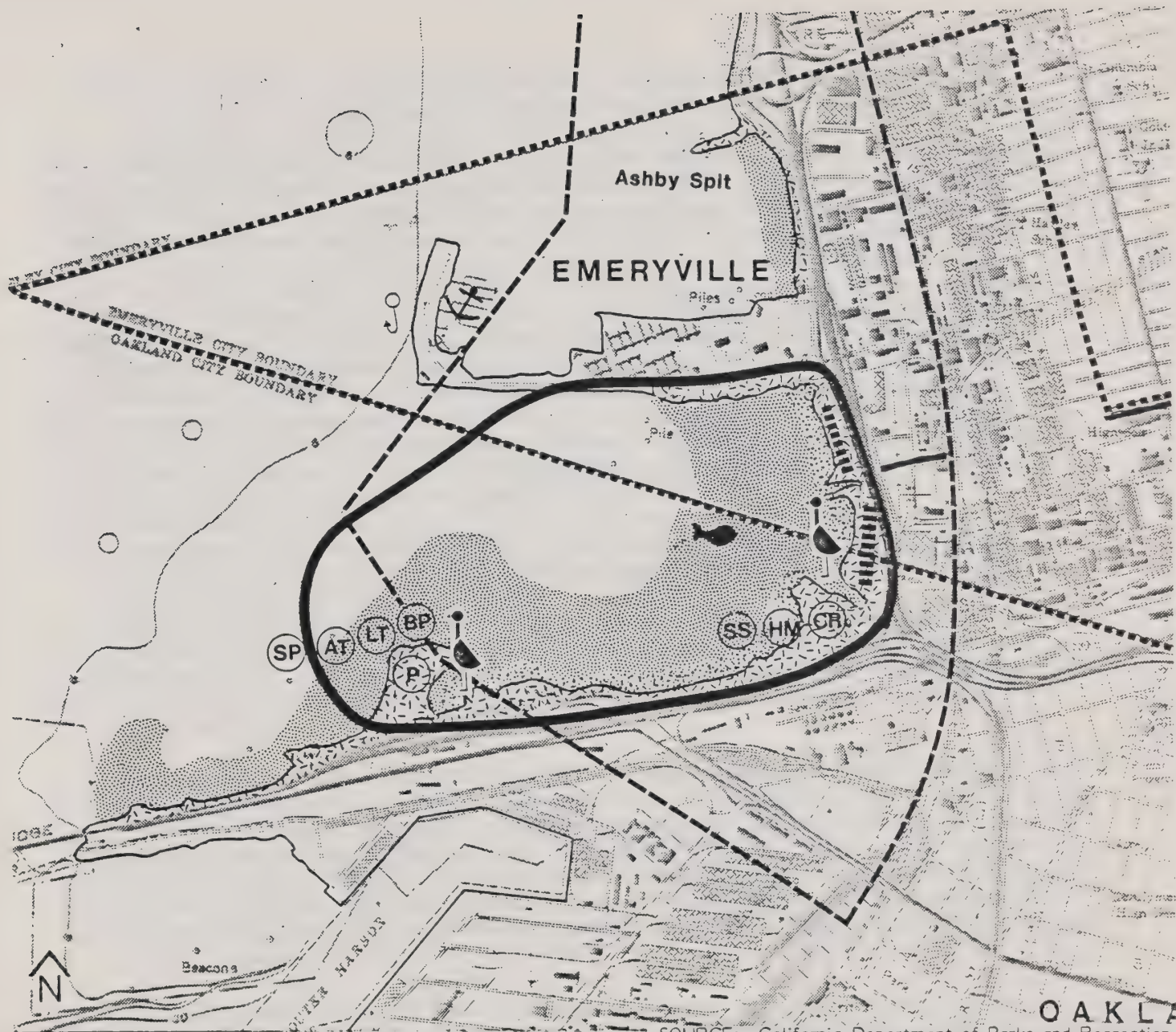
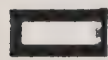


Figure IX-1
NATURAL RESOURCES

SOURCE: California Department of Parks and Recreation, East Bay Shoreline Feasibility Study, December 1982; California State Lands Commission, Public Trust Rights and Needs in the Albany Baylands, October 1982.



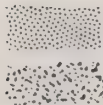
Emeryville Crescent-Regionally Critical Wildlife Habitat



Waterbird Habitat



Striped Bass Spawning Area



Mud Flat



Salt Marsh



Tidal Upland



Temescal Creek



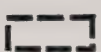
Marina



Fishing



Sculpture Area



BTLC "Property" Sold



Species of Concern

P

RARE PLANT

CR

CALIFORNIA CLAPPER RAIL

HM

SALT MARSH HARVEST MOUSE

LT

CALIFORNIA LEAST TERN

BP

CALIFORNIA BROWN PELICAN

SS

ALAMEDA SALT MARSH SONG SPARROW

SP

SNOWY PLOVER

AT

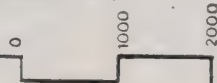
ARCTIC TERN

EMERYVILLE GENERAL PLAN

SEDWAY COOKE ASSOCIATES

Urban and Environmental Planners and Designers

scale in feet



take possession of submerged and tidal lands and sell lots within its boundaries.¹ (Figure IX-1 illustrates the boundaries of the tidal lands that were sold.)

Abuses in the sale of tidelands led to law in 1879 which prohibited the sale of these lands to private parties within two miles of an incorporated city. The law also stated that the public right-of-way must not be obstructed on these waters when they are required for a public purpose. This, in effect, placed tideland areas in what is known as the "public trust."²

In City of Berkeley v. Superior Court, 26 Cal 3d 515 (1980), the court ruled that the state is the owner of the public trust easement over submerged lands and tidelands conveyed by BTLC deeds. Private ownership of the wetlands is restricted to the underlying fee title only. When an exercise of the trust is for a valid purpose such as open space, passive recreation, wildlife habitat or water usage, the state does not need concurrence of adjoining or underlying fee owners. Furthermore, the state is not required to compensate the private fee owner for diminution in the number of uses to which the underlying fee can be put, as exercise of the trust does not represent a "taking" of the property.³ Notwithstanding the above conditions, BTLC parcels that were filled and no longer physically considered tidelands as of 1980 would not be subject to the trust, although they are still subject to public access.⁴

Emeryville has requested the State Lands Commission to determine its rights to exercise the public trust over the bay shoreline areas, particularly the Emeryville Crescent. The State Lands Commission responded that it is the city's prerogative to exercise the trust, and that there are no likely impediments to Emeryville's doing so.⁵

Proposed Open Space Resources. For the past 20 years, citizens' groups in the East Bay have been working toward increasing access to the bay. These efforts culminated in a specific proposal, prepared by the State Department of Parks and Recreation and the Coastal Conservancy, for a park along the East Bay shoreline, and presented to the California Parks and Recreation Commission in March 1980. The park would extend from the southern Contra Costa County line to the Oakland Bay Bridge toll plaza.⁶ Its major feature would be a bicycle/pedestrian pathway from one end to the other.

¹ California State Lands Commission, Public Trust Rights and Needs in the Albany Baylands, October 1982, pp. 16, 20.

² California Department of Parks and Recreation, East Bay Shoreline: Feasibility Study, December 1982, p. 14.

³ California State Lands Commission, Public Trust Rights and Needs in the Albany Baylands, October 1982, pp. 20-21.

⁴ Ibid., p. 16.

⁵ Michael R. Valentine, Staff Counsel III, California State Lands Commission, November 28, 1984.

⁶ Ken Collier, Planning Division, California Department of Parks and Recreation, November 16, 1984.

With passage of the California Parklands Act of 1980 (SB 624, Nejedly), which was Proposition I on the November 1980 ballot, the State Parks and Recreation Commission formally recommended in March 1981 that the East Bay shoreline proposal be given top funding priority.¹ Consequently, the State Department of Parks and Recreation has allocated \$9 million toward the purposes of the East Bay shoreline park. These funds may be used for planning, development and acquisition, and Emeryville is now eligible to receive planning funds. In order to obtain these funds, the city must make a direct request to the State Department of Parks and Recreation. According to State staff, however, there are no formal application forms or criteria for allocation of funds. The State Parks and Recreation Department is in the process of allocating planning monies to the cities of Berkeley and Albany. Little funding has been allocated for development or acquisition, and it is possible that acquisition may not be necessary, as exercise of the public trust easement may preclude any use of the land which is detrimental to the purposes of the park project. If acquisition is ultimately necessary or desirable, the cost may be low due to the limited uses to which the land can be put.²

Development of the proposed park would follow recommendations included in the Department of Parks and Recreation's feasibility study. Within Emeryville, a pathway would be built along the North Frontage Road south to Powell Street. At Powell Street, the path could continue through the Emeryville Crescent to the Oakland Bay Bridge Toll Plaza or follow alternative routes through Emeryville to Oakland. The decision on an appropriate route must consider whether the potential benefits of a bike path through the Crescent outweigh the potential damage to its sensitive wildlife area.

The feasibility study also recommended the acquisition and development of the Ashby Spit (three acres) for a passive recreation area and 12-car parking area; the shoreline strip between the Spit and the Peninsula (four acres); and the Peninsula's southern shoreline for pedestrians and bicyclists. It was recommended the Emeryville Crescent (500 acres in Emeryville and Oakland) be acquired and managed by the U.S. Fish and Wildlife Service or the California Department of Fish and Game as part of the San Francisco Bay Wildlife Refuge System, with controlled public access to protect the fragile environment.³

Public Agencies Affecting Open Space Management. Federal, state, regional, and local agencies have a variety of responsibilities in the conservation and management of open space resources. Of primary concern are the institutional arrangements for protecting the Crescent. This section identifies agencies with interests and responsibilities along the East Bay shoreline.

¹ California Department of Parks and Recreation, East Bay Shoreline: Feasibility Study, December 1982, pp. 2, 7.

² Ken Collier, Planning Division, California Department of Parks and Recreation, December 15, 1984.

³ California Department of Parks and Recreation, East Bay Shoreline: Feasibility Study, December 1982, p. 3.

U.S. Fish and Wildlife Service.¹ The U.S. Fish and Wildlife Service has expressed a strong interest in the Emeryville Crescent as one of the few remaining tidal marshes in the San Francisco Bay. The Service would not, however, purchase the land, as it believes the Clean Water Act, BCDC and the potential public trust easement provide a reasonable degree of protection from non-water development. Because any alteration of the land may affect the tidal marsh, the Service has requested review of any development proposed near the shoreline. The main issues of concern to the U.S. Fish and Wildlife are protection of the rare and endangered species which are known to inhabit the area, protection of migratory bird and fish habitats, and protection of the bay's ecosystem. Because of the presence of the endangered Salt Marsh Harvest Mouse and Clapper Rail in the Crescent, the U.S. Fish and Wildlife recommends against a continuous path through the Crescent and suggests that the driftwood sculptures on the mudflats may be seriously damaging the natural environment essential for survival of these species.

California Department of Fish and Game. This agency would assume management responsibility for the Emeryville Crescent as a wildlife refuge regardless of who acquires it. Responsibility for acquisition is unclear at this time, and as mentioned earlier, acquisition may not be necessary if the public trust doctrine is exercised. As a wildlife refuge, the Crescent would not be publicly or privately developed or given extensive public access. The department is neutral on whether a bike path through the refuge is appropriate; however, in order to manage the area as a wildlife refuge, wildlife and people must be separated. Ideally, the sculpture garden would be removed, but a limited and restricted area for driftwood sculpture could be provided and perhaps improved from its present state by requiring all sculpture to be constructed of natural materials and in natural colors.²

Coastal Conservancy. The Coastal Conservancy, a state agency charged with protection and enhancement of resources in the coastal zone and the San Francisco Bay shoreline, may award loans or grants to local, state, or other public agencies and to nonprofit organizations and land trusts, or may undertake projects itself where local agencies are unable to do so. The Coastal Conservancy is presently funding shoreline access projects in Berkeley and will soon provide funds to Albany as well. In addition, the Conservancy has the ability to mitigate the environmental impacts of development projects by providing public access where necessary or desirable.³

Bay Conservation and Development Commission (BCDC). BCDC has jurisdiction over lands 100 feet landward of the bay shoreline. Any development which is proposed within this boundary must be consistent with BCDC's Bay Plan.⁴ The Bay Plan policies that affect Emeryville are as follows:

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- ¹ Peggy Kohl, U.S. Fish and Wildlife Service, December 12, 1984.
 - ² Ted Wooster, Environmental Services Supervisor, California Department of Fish and Game, November 16, 1984.
 - ³ Peter Brand, Coastal Development Analyst, California Coastal Conservancy, November 26, 1984.
 - ⁴ San Francisco Bay Conservation and Development Commission, San Francisco Bay Plan, January 1969, as amended July 1979, September 1983.

- Wildlife. Bay Plan map 4 identifies the Emeryville Crescent as a high-value waterbird habitat and wildlife area. Nothing may be constructed within BCDC's jurisdiction which would be detrimental to the preservation of this area as a wildlife refuge.
- Public Access. Public access to the bay, according to BCDC policies, should serve scenic, recreational and educational purposes. Access should be provided where it will not be detrimental to the purposes of a refuge; although if access is restricted to a less fragile area which still offers views and an interpretive exhibit illustrating the fragility of the environment is provided, visitors may be less tempted to disturb the wildlife area.¹ A pathway along the southern shoreline of the Peninsula has been required by BCDC of the City of Emeryville for the past 14 years. The city would prefer to install the path after it has installed erosion control measures along the shoreline.²
- Filling. The Bay Plan specifies that the Emeryville area should be developed for public and commercial recreation areas and that such development be coordinated with Albany and Berkeley. It notes that "some fill may be necessary to create usable shoreline areas, protected water areas and park space."³ The narrow section of the Frontage Road north of the Peninsula would be widened for pedestrians when the bicycle/pedestrian path is constructed, but actual filling of the bay for this purpose is not anticipated.⁴
- Views. Views of the bay must be maintained; new development, accordingly, must not create a wall between the bay and the land.
- Appearance, Design and Scenic Views. According to the Bay Plan, "unnatural debris should be removed from sloughs, marshes, and mudflats that are retained as part of the ecological system. Sloughs, marshes and mudflats should be restored to their former natural state if they have been despoiled by human activities."⁵ Although the activities on the mudflats undoubtedly harm the fragile environment, structures like the sculptures draw people to the bayshore who would not normally experience the bay. Consequently, BCDC is divided on whether the Emeryville driftwood sculptures should be removed or retained.

¹ Nancy Wakeman, Chief of Permits, Bay Conservation and Development Commission, November 16, 1984.

² Gisele Wolf, Operations Manager, Emeryville Department of Public Works, September 19, 1984.

³ San Francisco Bay Conservation and Development Commission, San Francisco Bay Plan, January 1969, as amended July 1979, September 1983, Map 4.

⁴ Nancy Wakeman, Chief of Permits, Bay Conservation and Development Commission, November 16, 1984.

⁵ San Francisco Bay Conservation and Development Commission, San Francisco Bay Plan, January 1969, as amended July 1979, September 1983, p. 29.

East Bay Regional Parks District. A shoreline path through Alameda County has been tentatively proposed for the past decade, although responsibility for implementation of this plan has never been identified. The East Bay Regional Parks District currently is not planning any acquisition for construction of a path; however, it would oversee maintenance and operation if one were constructed.¹

Alameda County. The County, in its general plan, recommends that natural areas be assessed for their resource sensitivity and vulnerability to development impacts. It also recommends that the regional park district or federal and state agencies acquire "for public management those environmental resource areas which are of critical countywide, regional, statewide, or national significance, including important wildlife habitat areas, watersheds and groundwater basins, and areas providing or having the potential to serve outdoor recreation needs."²

City of Berkeley. Berkeley's waterfront area plays a major role in plans for the East Bay shoreline park. The city is currently conducting a study of the waterfront area and preliminary plans will be available early in 1985.

City of Oakland. The Oakland General Plan proposes a bicycle/pedestrian path through the Emeryville Crescent. The plan asserts that the path would not be inconsistent with a wildlife refuge.

Port of Oakland. A portion of the land in the Emeryville Crescent, outside of Emeryville itself, lies within the jurisdiction of the Port of Oakland. It is designated for recreational uses in the Port's shoreline plan, although the north harbor site is proposed as a future shipping terminal. The construction of this project would require landfill and is contingent on a permit from BCDC.

Audubon Society. This organization, in conjunction with the Bodega Bay Institute, sponsored an exhaustive study of the Crescent's ecology.³ The Golden Gate Chapter of the Audubon Society opposes the bicycle path, because the public access such a path would provide is inappropriate for a fragile area. In particular, the presence of people and their pets in the Crescent would seriously disturb the Clapper Rail habitat. To protect the area, the Audubon Society calls for the removal of the driftwood sculptures to the area north of Temescal Creek; the restriction of access south of this area, and the construction of an interpretive exhibit demonstrating the fragility of the area.⁴

¹ Peter Koos, Senior Landscape Architect, East Bay Regional Parks District, November 9, 1984.

² County of Alameda, General Plan for the Central Metropolitan, Eden and Washington Planning Units, January 1981, p. 25.

³ Bodega Bay Institute, The Crescent: An Environmental Assessment of the Emeryville Crescent, Golden Gate Audubon Society, 1978.

⁴ John Zublackis, Past President, Golden Gate Audubon Society, December 12, 1984.

WATER QUALITY

Because of the importance of the San Francisco Bay as an environmental, economic, recreational, and visual resource, protection of its water quality is of critical concern to all jurisdictions along the shoreline. Water quality management efforts are described in the Regional Water Quality Control Plan, which also defines beneficial uses of the bay as well as the water quality standards necessary for those uses. The plan is administered by the Regional Water Quality Control Board, which has the authority to penalize dischargers who violate water quality standards. Beneficial uses of the bay salt marshes such as the Emeryville Crescent, as outlined in the Water Quality Control Plan (1982) include:

- **Water Contact Recreation.** Recreational uses involving actual body contact with water, including swimming, wading, and sport fishing.¹
- **Non-Contact Water Recreation.** Recreational uses that do not require actual contact with water (picnicking, hiking, sunbathing, marine life study, and visual enjoyment).
- **Wildlife Habitat.** Provides a water supply and vegetative habitat for wildlife.
- **Preservation of Rare and Endangered Species.** Provides an aquatic habitat which may be essential to the survival of a species.
- **Fish Spawning.** Provides an aquatic habitat especially suited to fish spawning.
- **Estuarine Habitat.** Provides a habitat essential to acclimate fish migrating from salt water to fresh water conditions, or vice versa. Also provides an environment supportive of fish and shellfish, water fowl and shorebirds, and marine mammals.

Other beneficial uses for waters in this portion of the bay include industrial service and process supply, navigation, commercial and sport fishing, fish migration, and shellfish harvesting.

There are two primary sources of water pollution that can threaten these uses: point sources and nonpoint sources. Point sources are dischargers that dispose of their wastewater, or effluent, from a single point, such as a wastewater treatment plant outfall. Effluent from these sources is relatively easy to control by applying treatment processes at the "end of the pipe." In contrast, nonpoint sources are described as diffuse, areawide sources, such as construction sites and agricultural drainage areas. These sources often are not amenable to structural solutions and typically require land management or nonstructural source controls.

Discharges from point sources are regulated by the Regional Water Quality Control Board which issues effluent standards as well as permits stipulating the conditions

¹ This would conflict with rare and endangered wildlife habitat uses, and should be reconciled in the Crescent.

and water quality standards that must be met by certain municipal and industrial dischargers. None of the industries in Emeryville are considered major dischargers as most only have small discharges of cooling water and/or runoff. The effect of these standards and regulations has been to greatly reduce the pollutant loading from these sources. However, water quality protection efforts must be continued because studies show nonpoint sources to be significant contributors to water pollution.

In the Emeryville vicinity where the land is virtually all urbanized, urban stormwater runoff is a major source of nonpoint source water pollution. Pollutants such as suspended solids, heavy metals, and nutrients are found in samples of urban stormwater runoff. These pollutants are typically deposited onto street surfaces and washed into receiving waters during the initial phases of a storm. This "first flush effect" can create a serious oxygen depletion in the vicinity of the discharge and result in a serious diminution of the water's ability to assimilate waste loads. The Association of Bay Area Governments has estimated the amount of suspended solids from stormwater runoff to be an order of magnitude greater than from various point sources around the bay.¹ A direct example of the problems associated with stormwater runoff is the contamination of shellfish harvesting areas near East Bay creeks and storm drains.²

The Regional Water Quality Control Board also coordinates with the State Department of Health Services in the investigation and clean-up of site contamination due to inappropriate storage, handling, treatment, or disposal practices associated with toxic wastes and hazardous materials. The Board is also responsible for monitoring industrial sites for possible leakage of hazardous materials. Activity in this area has increased due to increased availability of information and greater awareness on the parts of companies and individuals. There is considerable concern that the Emeryville Crescent was once used as a chemical dumping site by the Sherwin-Williams Paint Company and Meyers Drum Company.³

AIR QUALITY

Air Quality Standards. The passage of the Air Quality Act of 1967, subsequently known as the Clean Air Act, provided the first national program to control pollution from automobiles and stationary sources. Under the provisions of this Act, states submit plans for control of air quality. California began setting standards in 1969 with the passage of the Mulford-Carrell Act. Federal air quality standards are classified as primary standards which seek to protect human health and secondary standards which are designed to protect not only human health but property and the appearance of the air. The State of California employs more stringent regulations for vehicle emissions under a program administered by the Air Resources Board.

¹ California Regional Water Quality Control Board, San Francisco Bay Region Water Quality Control Plan: San Francisco Bay Basin, July 1982, pp. 4-36.

² California Department of Parks and Recreation, East Bay Shoreline: Feasibility Study, December 1982, p. 8.

³ Ibid., p. 14.

Regional Setting. In the Bay Area, federal ambient air quality standards for ozone and carbon monoxide are exceeded. The federal secondary standard for total suspended particulates is exceeded on occasion. Because these air quality standards are not being met, the entire Bay Area has been designated by the U.S. Environmental Protection Agency as a "non-attainment" area for these pollutants. The 1982 Bay Area Air Quality Plan, prepared by the Association of Bay Area Governments (ABAG) and other government agencies, contains measures to reduce emissions from both stationary sources and motor vehicles to levels which will result in attainment of air quality standards by 1987.

The Bay Area Air Quality Management District (BAAQMD) guides air quality planning in the Bay Area, and documents and enforces compliance with standards. Since 1972, any company which builds or expands a facility in the Bay Area must first obtain a permit from BAAQMD. The District regulates the quantity and type of emissions allowed from all facilities.¹

Brief summaries of Bay Area air quality levels for each of the five pollutants for which federal standards have been established are provided below.² Federal standards were not exceeded for any of the pollutants in Emeryville in 1982.

Ozone. In 1982, the BAAQMD's 21 ozone stations recorded the fewest exceedances in 21 years of recording, with 5 days over the federal 0.12 parts per million (ppm) standard. The federal standard is based on an estimate of the average number of days per year with concentrations above the standard in the last three years. This is called the expected number of annual exceedances (EAE). A site is in compliance if its EAE does not exceed 1.0. The Emeryville area EAE is 0.

Carbon Monoxide. Over 90 percent of the Bay Area's carbon monoxide (CO) is emitted from vehicular sources. Federal and state one-hour CO standards have not been exceeded in the current decade. The federal eight-hour standard of 9 ppm has been frequently exceeded in San Jose and Vallejo. Emeryville's eight-hour CO emissions are between 3 ppm and 6 ppm. Exceedance of standards can easily occur where traffic is congested and cars are idling for long periods of time, such as along Powell Street near the freeway interchange.

Total Suspended Particulate. The annual geometric means of total suspended particulate (TSP) show a pattern of low values near the coast, increasing with distance inland, particularly into dry sheltered valleys. The federal primary standard is an annual geometric mean (AGM) value of 75 micrograms per cubic meter, with a secondary AGM standard of 60 micrograms per cubic meter. In 1982, all stations met both standards. There are two federal 24-hour standards that are not to be exceeded more than once a year: 260 and 150 micrograms per cubic meter correspond to the primary and secondary standards, respectively. These standards were also met at all stations. Values in the Emeryville area were 45-50 micrograms per cubic meter.

¹ Bay Area Air Quality Management District, Air Quality Handbook, 1983-1984.

² Association of Bay Area Governments, Bay Area Air Quality Management District, Metropolitan Transportation Commission, San Francisco Bay Area Annual Air Quality Report for 1982, October 1983.

Sulfur Dioxide. The federal standard for sulfur dioxide is 30 parts per billion (ppb) on an annual average. Most of the Bay Area has less than one-sixtieth of the levels allowed. Annual average sulfur dioxide levels for Emeryville in 1982 were less than 0.5 ppb.

Nitrogen Dioxide. Nitrogen dioxide is a major ingredient in the formation of photochemical smog and creates a brown discoloration of the air. A state one-hour standard of 25 pphm has been established at the level where the discoloration just becomes visible. This standard was met at all stations in 1982. The federal standard, expressed as an annual average of 5.0 pphm, was also met at all stations. The San Francisco-Oakland area, which includes Emeryville, experienced 1982 annual average nitrogen dioxide values of less than 2.5 pphm.

Local Air Quality and Climate. Air quality in Emeryville is strongly influenced by the winds blowing off San Francisco Bay. These are predominantly southwesterly winds (37 percent) with a significant amount of calm (32 percent). Air quality in the city is generally good due to the prevailing wind direction. It can, however, contribute to problems at downwind sites such as the Diablo and the Santa Clara Valleys.¹

Local Point Sources of Pollutants. Major facilities emitting significant amounts of air pollutants are listed in the Base Year 1982 Emissions Inventory published in November 1983. Table IX-1 identifies those facilities and their average emissions for 1982; inclusion on this list does not imply violation of air quality standards. Information on exceedances of emissions standards at point sources is unavailable. Two firms within Emeryville have had complaints filed against them, however. Peterson Rendering Company on 62nd Street emits odors which are offensive to nearby residents and employees. Judson Steel has been cited on occasion for exceeding particulate standards.²

TABLE IX-1
MAJOR FACILITIES EMITTING AIR POLLUTANTS

<u>Facility</u>	<u>Average Annual Emissions (tons/day)</u>
Clearprint Paper Company	.09 Total Organics
Judson Steel Corporation	.08 Nitrogen Oxides .11 Carbon Monoxide
Myers Drum Company	.08 Total Organics
Pfizer Incorporated	.02 Particulates .09 Nitrogen Oxides .02 Carbon Monoxide

Source: Bay Area Air Quality Management District, Base Year 1982 Emissions Inventory Summary Report, November 1, 1983, pp. 22, 26, 27, 29.

¹ City of Emeryville, Final Environmental Impact Report on the Amended Redevelopment Plan, August 1983, p. 75.

² Bob Card, Field Inspector, Bay Area Air Quality Management District, December 5, 1984.

ENERGY

The Role of the Local Government. There are many reasons why local government should be involved in increasing energy efficiency.

- Local government controls land use patterns and building type and construction. These are major determinants of energy use.
- Another major determinant of energy use--in fact, the most important one--is behavior. Local government is closer to people and can facilitate behavioral changes more easily.
- Local government deals only with the characteristics of its particular environment and can identify specific solutions to the energy problem that respond to local needs.
- In the event of an oil shortage, the consequences will have to be dealt with at the local level. The federal government will require that the available gasoline be rationed. The the local "infrastructure"--public transportation, proximity of shopping centers to homes, etc.--will determine the extent to which the rationing disrupts the lives of residents.

Waiting for federal and state government action may mean waiting for a long time. It is true that the California Energy Commission initiated the first efforts to increase energy efficiency. But developing regulations is a slow process at that level of government. Legislation must apply to the whole state and, once the regulations are approved, they still have to be refined to fit into each local government's unique processes. Initial energy conservation standards took years to reach the point of implementation. Implementation of regulations at the federal level is even more difficult. After years of research and preparation of the Building Energy Performance Standards (BEPS), their implementation has been delayed for two more years by Congress "until further research on energy consumption budgets is done." The federal government is only beginning to acknowledge the value of passive design even though it has been demonstrated to be the most cost-effective way to reducing a building's energy use. The federal solar tax credit still does not include passive design.

At the local level, actions can be taken much more quickly and can be tailored to the community's needs and regulatory processes. Local government's role often consists of removing barriers to the use of renewable resources. At the same time, regulations can be developed to facilitate energy efficiency. Typical programs include the adoption of ordinances to require that the thermal efficiency of existing structures be upgraded, that standards affecting new construction be modified to better address local climatic conditions, that solar water heating be required in new and/or existing structures, and that solar access to existing or potential solar collectors be provided and protected. Many jurisdictions throughout California have adopted such programs, including San Diego County, Santa Barbara County, Santa Clara County and a variety of cities. Many other localities are considering similar programs.

In some cases, it is very easy and inexpensive to implement an energy efficiency option at one point in time and much more difficult and costly to do so later. This is especially true of passive design measures. It costs nothing to provide for solar

access in a new structure but may be impossible to do so once it has been built. Since a residential structure built today will probably still be standing 75 or 100 years from now, it is critical that it be built right in the first place.

Another example of the long-term energy implications of local government decisions is the relationship of a given land use pattern to the transportation system required to service it. A pattern characterized by large residential lots will virtually guarantee dependence on the automobile. In contrast, the concentration of the same number of residents on smaller lots within walking distance (1,000 feet) of major streets will generate a level of transit ridership sufficient to guarantee self-supporting (i.e., fare box revenues cover costs) public transit. In both cases, the type and overall intensity of land use is the same. However, a concentrated development pattern is more conducive to a successful transportation system.

Defining the Energy Problem. Like each new area of concern that demands attention of local government, the energy field requires an understanding of a new body of information. Basic definitions and concepts need to be clarified in order to define the problem and to identify solutions to it.

Energy is required for all activity. Energy is needed to supply food, clothing and housing, as well as to operate that housing, and to provide transportation. All categories of energy use should be considered because all of them can be reduced by actions at the local level. Energy use includes (1) the energy consumed directly within the city in the residential, commercial and transportation sectors, i.e., direct (in-city) energy use; and (2) the energy used to produce goods that are imported into the city, i.e., indirect energy use.

In addition, energy can be disaggregated into primary, delivered, and end-use energy. Primary energy includes the energy used to convert fuel into electricity and the energy that is lost in the transmission of electricity to its users. When production and transmission losses are excluded, energy consumption is referred to as delivered energy, i.e., the energy actually delivered to the consumer to meet his or her end-use demand. The end-use demand is the energy actually required to accomplish a given task. Conversion of delivered electricity into end-use energy is more efficient than conversion of natural gas, achieving an efficiency of about 95%. In contrast, the process of producing that electricity from coal or oil and of transmitting it to the consumer is only about 32% efficient.

Most conventional energy, with the exception of hydroelectric power is derived from nonrenewable sources. By definition, the supply of nonrenewable energy sources is finite. Nonrenewable energy sources include oil, natural gas, coal and uranium. End-use energy can also be provided by renewable energy sources. Renewable energy sources consist of energy derived directly or indirectly from the sun, i.e., sunlight, wind, biomass (plant material) or moving water. In contrast to nonrenewable energy sources, these supplies cannot be depleted. Because nonrenewable energy sources, along with other nonrenewable resources, will ultimately run out, it is important to use them as efficiently as possible today to construct an energy supply system that can rely on renewable energy sources in the future.

Pacific Gas & Electric is currently compiling information on Emeryville's direct energy consumption by energy use sector. The data will indicate, for each sector,

the form of energy consumed, i.e., natural gas, gasoline or diesel fuel, or electricity, and will be used to identify areas for improved energy efficiency.

CULTURAL RESOURCES

Emeryville's Heritage. The California Environmental Quality Act of 1970, as amended 1984, Section 21083.2(a), requires an assessment of potential effects on unique archaeological resources. The following summary of archaeological resources, except where noted, was provided by the California Archaeological Inventory at the Northwest Information Center of Sonoma State University.¹

The first inhabitants of the San Francisco Bay were the Costanoan Indians, who lived along the bay's shorelines more than 4,000 years ago. Marshy land, particularly where freshwater creeks entered the bay, were desirable homesites for the Indians. One remnant of their occupation of this locale is the shellmounds along the waterfront. The Emeryville Shellmound--one of the largest in the Bay Area--as well as other recorded prehistoric sites were once adjacent to marshland (see Figure VIII-1, which illustrates the historic margins of the bay). The Emeryville Shellmound, estimated to have been 1,000 feet long, 300 feet wide and 22 feet high, is located east of Interstate 80 along Temescal Creek. The railroad track may traverse a portion of the mound remnant, which is approximately 8.5 feet below the surface.² Archaeological excavations of the shellmounds began as early as 1902. Nine sites along the creek have been recorded.³

Shellmounds also tend to occur in marsh areas with no freshwater source immediately adjacent; therefore, it is moderately to highly probable that other unrecorded prehistoric shellmounds exist in the vicinity of the original shoreline. This possibility is greatest near the northern city limit where an 1878 map depicts a creek entering the bay. Prehistoric sites (prior to the rising of the San Francisco Bay about 5,000-6,000 years ago) may exist below the current bay levels.

Based on archaeological records, the California Archaeological Inventory has determined that the shellmounds in the Emeryville area have been destroyed. However, there have been no studies to confirm this, and there is a high possibility that subsurface deposits of these sites, or of other unrecorded sites, may still exist in the areas of old marshland and creeks. Since the extent of the resources is unknown and the possibility of their existence is high, the Archaeological Inventory recommends archival and field study to determine those places in Emeryville which may contain prehistoric archaeological resources.

¹ Christian Gerike, Assistant Coordinator, California Archaeological Inventory, Sonoma State University, correspondence of December 2, 1984.

² City of Emeryville, Final Environmental Impact Report on the Amended Redevelopment Plan, August 1983, p. 131.

³ Caltrans, Environmental Planning Branch, Archaeological Survey Report for Proposed High Occupancy Vehicle Lanes from Bay Bridge to Carquinez Bridge, May 1982.

Colonists of the Spanish Empire first introduced agriculture and domesticated animals to the region in 1820. Luis Maria Peralta received the first land grant of more than 48,000 acres, encompassing an area from Emeryville northward to include what is now the northern portion of Alameda County. Mexican citizens settled the area from 1822 to 1846.¹ The mouth of Temescal Creek was used at that time as a landing for the Peralta family's Rancho San Antonio.

The California Gold Rush attracted thousands of immigrants, and the Peralta family could no longer retain control of the entire land grant. Structures had been built throughout Emeryville and by 1878, most of the city had been urbanized. The East Bay's oldest steel mill, Judson Steel, began operations in 1882, initiating the city's extensive industrial development. Many late 19th- and early 20th-century industrial structures today represent unique cultural resources.

Historic Building. None of the older structures in the city are identified or registered as historic properties by the State Office of Historic Preservation or the federal Office of Archaeology and Historic Preservation. However, a citywide visual survey performed by Sedway Cooke Associates identified several areas of architectural and/or historical merit. In assessing the merit of a structure, the following factors were considered:

- local historic value,
- design merit,
- building condition,
- association with nearby similar or related structures, and
- suitability for reuse.

These resources, shown in Figure V-2, in the urban design section, include a number of the brick industrial buildings, dating from the early 20th century and in excellent condition. They are concentrated in the area of Park Boulevard, 45th Street and Horton Street. Landmark buildings, such as the Old Town Hall and Westinghouse, are also shown as significant individual structures. Victorian-era residential structures, representative of the homes that were built in the second half of the 19th century in San Francisco and the East Bay, can be found in the Triangle and in the older residential area between Doyle and Vallejo Streets. These buildings have been identified by the East Bay Heritage Foundation as worthy of preservation and rehabilitation.²

Historic Preservation Grant Program. The California Parks and Recreation Facilities Act of 1984 (California Public Resources Code, Division 5, Chapter 1.691) has allocated \$10 million for grants to cities, counties and special districts for acquisition, development, rehabilitation or restoration of historical resources. The grant may fund preservation projects and the costs of planning and interpretation. This program is to be administered by the Office of Historic Preservation of the California Department of Parks and Recreation.

¹ California Department of Parks and Recreation, East Bay Shoreline: Feasibility Study, December 1982, p. 13.

² City of Emeryville, Final Environmental Impact Report on the Amended Redevelopment Plan, August, 1983, p. 131.

Applications for the first year of funding (\$4 million) were due by December 31, 1984. Two more years of funding (\$3 million each year) will be available. The minimum grant is \$10,000 and the maximum is \$300,000. Properties eligible for grants must have historical significance, either by meeting criteria for the National Register of Historic Places or because they are "significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California."¹

¹ California Department of Parks and Recreation, Office of Historic Preservation, Grant Application, Historic Preservation Grant Program, October 1984.



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